

APPENDIX F-4  
MAINTENANCE CHECKLIST

SPERRY + UNIVAC

MAINTENANCE CHECK LIST

PLT. NO. MAIL STATION

DATE

ORGANIZATION NAME

MAINTENANCE DISCREPANCY

REMARKS:

SIGNATURE

DATE COMPLETED

UD1-2608

APPENDIX F-3



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## ENVIRONMENTAL CONTROL PROCEDURE

|                    |  |          |                                  |
|--------------------|--|----------|----------------------------------|
| DETAIL DESCRIPTION | Chemical & Hazardous Material<br>Emergency Response Procedure - Disk #L-ac-2 | REF      | 40 CFR 117, 263, 264<br>265, 761 |
| ENGINEER           | D. E. MacDonald  | DATE     |                                  |
|                    |  | APPROVAL | <i>[Signature]</i>               |
|                    |  | DATE     | 12/9/85                          |

### 1.0 GENERAL

This procedure explains how to handle a hazardous material emergency. In response to an emergency involving hazardous materials an authorized hazardous material coordinator must be contacted. This procedure includes a list of personnel available, chemical handling data and forms to help the coordinator to handle an emergency as efficiently as possible. Use this procedure in the event of a hazardous material emergency for the safety of the environment, health of our personnel and operating capability of Sperry DPG facilities.

### 2.0 HAZARDOUS MATERIAL EMERGENCY

A hazardous material emergency exists when a spill or occurrence involving any hazardous material happens outside of the plants, including all bulk chemical and fuel oil deliveries. These must be reported to the Environmental Management Department. Inside the plant, any occurrence involving a material with a hazard code rating of 2 or above or one gallon or more should be treated as an emergency. The hazard code is marked on the CSD diamond hazard code label attached to the container. If a small spill of less than 1 gallon and the material doesn't have any of the hazard code ratings of 2 or higher, refer to ECP 37015 for clean up instructions.

### 3.0 PERSONNEL RESOURCES

- 3.1 Hazardous Material Emergency Coordinator - Personnel that are trained and responsible for this position are listed in Appendix I, Part A.
- 3.2 Hazardous Material Emergency Team - Team members consist of personnel from Environmental Management, listed in Appendix I, Part B.
- 3.3 Hazardous Material Emergency Support Groups - These groups will help support the coordinator and team as needed in an emergency. The group includes: personnel from Occupational Health Programs Department, the Emergency Brigade, Security Guards, Production and Process Engineers, Communication Department, Facility Maintenance, and independent spill contractor. Personnel to contact in these groups are listed in Appendix I, Part C, and Appendix II.



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|                    |   |      | DATE                             |

### 4.0 PERSONNEL RESPONSIBILITIES

- 4.1 Hazardous Material Emergency Coordinator - The coordinator is responsible for implementing this procedure and to coordinate all hazardous material emergencies. All personnel listed as a coordinator are knowledgeable of all hazardous materials, processes, equipment, and facility layout. They have the authority to commit an independent spill contractor to help in a clean up.
- 4.2 Hazardous Material Emergency Team Members
- 4.2.1 Environmental Management - Members of the team from Environmental Management are responsible for assessing the nature of the emergency, then containing and cleaning up. Environmental Management is also responsible for keeping this procedure updated and keeping all anticipated equipment needed clean and in operating condition.
- 4.3 Occupation Health - Occupational Health is responsible for the safety aspect of an emergency, material handling, evacuation and approval of re-entry of areas by personnel.
- 4.4 Emergency Brigade - Brigade members will report emergencies directly to Security Guards (Ext. 3000), help keep area clear of personnel and help in evacuation if needed.
- 4.5 Security Guards - Guards will report a hazardous material emergency to a Hazardous Material Emergency coordinator immediately using Appendix I, Part A. Guards will help with keeping personnel clear, evacuation, communications and back up support.
- 4.6 Production/Process Engineers - Engineers will consult with coordinator to identify nature of emergency and provide additional information about the material that is required for safe handling of the material.
- 4.7 Facility Maintenance - Provide help in making the necessary repairs, back-up support, help clean up, and movement of equipment as directed by the coordinators.
- 4.8 Communication Department - All communications to outside news media will be coordinated by a representative of the Communication Department.
- 4.9 Independent Spill Contractor - An open Purchase Order for services of an Independent spill contractor to help in a clean-up is available.





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| ENGINEER           | D. E. MacDonald   | DATE | APPROVAL                         |
|                    |   |      | DATE                             |

### 5.0 Procedure in the event of a Hazardous Material Emergency on Sperry Property.

- 5.1 In the event of a hazardous material emergency, the personnel or the Emergency Brigade member in the area dial Ext. 3000 to report to the guards.
  1. Name of person reporting.
  2. Location of the emergency.
  3. Nature of the emergency.
- 5.2 The guards must page the Hazardous Material Emergency Coordinator and team by paging the Environmental Management common pager number (#555).
- 5.3 The Hazardous Material Emergency team will organize a team effort to handle the hazardous material incident.
- 5.4 At the spill location the Hazardous Material Emergency Coordinator will do everything possible to minimize the hazards to human health, environment and property.
- 5.5 The Hazardous Material Emergency Coordinator must immediately identify the character, exact source, amount and extent of any released hazardous material. This information is then communicated to all other team members.
- 5.6 The Hazardous Material Emergency Coordinator must determine the possible hazards to human health or the environment and determine the course of action to take.
- 5.7 Evacuate personnel whose health is endangered. All unnecessary personnel must be evacuated from the area. Guards and Emergency Brigade will assist in evacuating and securing area.
- 5.8 The team will contain the emergency in an area as small as possible, clean up and dispose of the hazardous material.

### 6.0 Procedure after a Hazardous Material Incident.

- 6.1 Occupational Health is responsible for determining when personnel are allowed back into the work areas after an evacuation.
  - 6.1.1 Prepare air sampling equipment.
  - 6.1.2 Enter area and measure air concentration for level of contaminant.



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- 6.2 Hazardous Material Emergency Coordinator is responsible for notifying appropriate government agencies of a spill.
- 6.3 Hazardous Material Emergency Coordinator is responsible for complete clean up of the area and emergency equipment. This includes calling the independent contractor if the incident requires this action.
- 6.4 Hazardous Material Emergency Coordinator must prepare a written report of the incident as required by 40 CFR Part 264, Subpart D 264.56 (j).

### 7.0 Hazardous Chemical Incident Off Univac Property

- 7.1 The Security Guards or Telephone Operators will normally be notified of an emergency with regard to a hazardous material shipment of Sperry Chemicals.
- 7.2 A Hazardous Material Emergency Coordinator is notified immediately by the Security Guards.
- 7.3 The Sperry Hazardous Material Emergency Coordinator will contact the transporting company, if appropriate, to determine the nature of the incident.
- 7.4 The Sperry Hazardous Material Emergency Coordinator will ensure that proper government agencies are notified.
- 7.5 The Sperry Hazardous Material Emergency Coordinator will form a team which can best respond to the incident if required.
- 7.6 The Sperry Hazardous Material Emergency Coordinator will make arrangements to go to the site of the emergency if needed.
- 7.7 The team will proceed to the site to advise and supervise containment and cleanup.
- 7.8 The coordinator will be responsible for providing the EPA Regional Administrator with a written report.

### 8.0 Training or Personnel

- 8.1 All new Environmental Management personnel must receive Hazardous Chemical Emergency response training according to 40 CFR, Part 264, Subpart A, 264.16, within six months after starting work and must not work unsupervised until after receiving the training.
- 8.2 All Emergency Response Team Members must be trained in this procedure and review emergency response procedures at least yearly.



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- 8.3 All training must be documented and kept on file according to 40 CFR, Part 264, Subpart A, 264.16. See ECP 37016 for outline of training.



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### 1.0 Emergency Response Equipment Inspection

Use this as a guide to inventory and maintain all equipment that is necessary in a chemical and hazardous material emergency response. Use the monthly checklist at the beginning of each month. Discrepancies and remedial action taken will be noted on a remediable action log. A copy of this procedure and the inspection log must be maintained at each facility.

### 2.0 Shepard Road Facility

#### 2.1 Safety Equipment Cabinet

Make sure all hand tools are present and in proper working condition. Check that all hard hats are accounted for with face shields mounted, clean and free of abrasions, and scratches, enough to allow good vision. Take inventory on protective chemical suits, making sure each piece of the suit is present and in good shape. Inventory the plug rugs. Inspect the rope for any weaknesses, that it is clear and both metal clips work. The electrical extension cords should not have any abrasions, be clean, and male and female connections are in proper condition. The goggles and safety glasses should be clean and without scratches or abrasions. Take inventory of squeege's, rubber gloves, vacuum tools, and shovel, making sure that they are in good operating condition.

#### 2.2 Emergency Spill Cart

The major concern for the lab spill cart is the inventory of items. The gloves and coveralls are one time use items, so if they are dirty, replace them. Safety glasses should not have any abrasions and be clean.

#### 2.3 Vacuum Cleaner

Make sure vacuum cleaner functions properly by plugging it in and running the motor. The tank and head should be clean. When stored the vacuum head should be offset from tank in order to allow ventilation of the tank, otherwise, moisture, over a long period of time can damage motor parts.

#### 2.4 Emergency Pump

1 1/2" Sandpiper Pump on wheels. Hook up sandpiper pump with a suction and discharge hose, also supply house air to run a test by pumping out a five gallon pail of water to check proper function of pump.



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### 2.5 Safety Cabinet for 1 1/2" Hoses

Check for holes, dangerous looking abrasions, or weakness of hose. Also check gaskets and fittings at each end of hose for wear or improper function.

### 2.6 Scott Breathing Apparatus, Air-Pak 2.2 and the SKA-PAK emergency escape unit.

1. The Air-Pak 2.2 Air Cylinders shall be fully charged according to the manufacturer's instructions. It shall also be determined that the regulator warning devices functions properly. Respirator inspections shall include a check of the tightness of the connections and the condition of the face-piece, head bands, valves, and connecting tubes. Rubber or elastic parts shall be inspected for pliability and signs of deterioration. Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible and prevent them from distorting during storage.
2. The SKA-PAK emergency escape unit only differs in inspection from the Air Pak 2.2, when it comes to the air supply system and regulator warning device. There is no regulator warning device. The supply of air has to meet the requirements of 2216 P.S.I. of Med-Air Class D in the five minute air cylinder. The two 180/lb cylinders require tags on both cylinder necks that read full, partially full, and empty. One cylinder should be full at all times, which is 2200 P.S.I. The other cylinder can be partially full, but must be replace when empty. Air supply hoses must be pressurized and inspected for leaks and bad fittings. Check that tank regulators are set at 125 P.S.I.

### 2.7 Emergency Spill Trailer

Check to insure that all of the equipment listed in Appendix III, F is on hand, clean and serviceable. Check the operation of the gas operated air compressor to insure that it operates properly. Check the supply of gasoline for the compressor. Check the operation of the turn lights, the brake, parking and tail lights by hooking it into one of the Security trucks trailer outlet. Replace any equipment that is missing, make repairs as necessary.

### 2.8 Emergency Spill Drums

Check the location of the drums per Appendix III, G. Insure that they are in good condition. Check the quantity of absorbent material. Replace the drums if defective. Replenish the supply of absorbent material if needed.



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### 3.0 Sperry Park

#### 3.1 Safety Equipment Cabinets

Make sure all hand tools are present and in proper working condition. Check that all hard hats are accounted for with face shields mounted clear and free of abrasions and scratches, enough to allow good vision. Take inventory on protective chemical suits, making sure each piece of the suit is present and in good shape. The electrical extension cords should not have any abrasions, be clean, and the male and female connections are in proper condition. The goggles and safety glasses should be clean and without scratches or abrasions. Take inventory of squeege's, rubber gloves, shovels, 20 ft. rope, throw away coveralls, making sure that all items are in operating and functional condition.

#### 3.2 Emergency Spill Cart

Refer to 2.2 for inspection requirements.

#### 3.3 Vacuum Cleaner

Refer to 2.3 for inspection requirements.

#### 3.4 Emergency Pump

Refer to 2.4 for inspection requirements.

#### 3.5 Scott Breathing Apparatus

Refer to 2.6 for inspection requirements.

#### 3.6 Emergency Spill Drums

Refer to 2.8 for inspection requirements.

### 4.0 Midway

#### 4.1 Emergency Spill Drums

Refer to 2.8 for inspection requirements.



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| ENGINEER | D. E. MacDonald | DATE |  | APPROVAL |  | DATE |  |
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### Shepard Road Facility Checklist

|    |  |  |  |  |  |  |  |  |  |
|----|--|--|--|--|--|--|--|--|--|
| 1. | Safety Equipment Cabinet-Shepard Road  |  |  |  |  |  |  |  |  |
| 2. | Emergency Spill Cart Shepard Road      |  |  |  |  |  |  |  |  |
| 3. | Vacuum Cleaner Shepard Road            |  |  |  |  |  |  |  |  |
| 4. | Emergency Pump Shepard Road            |  |  |  |  |  |  |  |  |
| 5. | Safety Cabinet for Hose-Shepard Road   |  |  |  |  |  |  |  |  |
| 6. | Scott Breathing Apparatus Shepard Road |  |  |  |  |  |  |  |  |
|    | Air-Pak 2.2                            |  |  |  |  |  |  |  |  |
|    | SKA-PAK Emergency Escape Unit          |  |  |  |  |  |  |  |  |
| 7. | Emergency Spill Trailer                |  |  |  |  |  |  |  |  |
|    | Equipment Inventory                    |  |  |  |  |  |  |  |  |
|    | Compressor Operation                   |  |  |  |  |  |  |  |  |
|    | Gasoline Supply                        |  |  |  |  |  |  |  |  |
|    | Light Operation                        |  |  |  |  |  |  |  |  |
| 8. | Emergency Spill Drums Shepard Road     |  |  |  |  |  |  |  |  |
|    | Chemical Dock                          |  |  |  |  |  |  |  |  |
|    | Tank Farm                              |  |  |  |  |  |  |  |  |
|    | Boiler Room                            |  |  |  |  |  |  |  |  |
|    | P.C.B. Capacitors                      |  |  |  |  |  |  |  |  |

## G-2 ARRANGEMENTS WITH LOCAL FIRE AND POLICE DEPARTMENTS

Appendix G-2 (Page 238) are copies of the letters of transmittal when we submitted the contingency plan to the City of Eagan Fire Department, the City of Eagan Police Department, and Divine Redeemer Hospital.

Representatives of the Eagan Fire and Police departments tour each of the facilities to refamiliarize them on the layout and location of hazardous material storage areas. The city of Eagan Fire and Police Departments are the only Fire and Police Departments which would be contacted by us in an emergency.

The most recent tour was on February 16, 1984 with the Eagan fire marshall. Areas reviewed included chemical storage areas, laboratories, electrical equipment with capacitors and safety equipment locations. We also reviewed the contingency plan, and discussed the contracts we have with outside spill control contractors.





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|                    |   |      | DATE                             |

### Sperry Park Facility Checklist

|    |  |  |  |  |  |  |  |  |  |
|----|--|--|--|--|--|--|--|--|--|
| 1. | Safety Equipment<br>Cabinet-Sperry Park  |  |  |  |  |  |  |  |  |
| 2. | Emergency Spill Card<br>Sperry Park      |  |  |  |  |  |  |  |  |
| 3. | Vacuum Cleaner<br>Sperry Park            |  |  |  |  |  |  |  |  |
| 4. | Emergency Pump<br>Sperry Park            |  |  |  |  |  |  |  |  |
| 5. | Scott Breathing Apparatus<br>Sperry Park |  |  |  |  |  |  |  |  |
|    | Air Pak 2.2                              |  |  |  |  |  |  |  |  |
|    | SKA-PAK Emergency<br>Escape Unit         |  |  |  |  |  |  |  |  |
| 6. | Emergency Spill Drums<br>Sperry Park     |  |  |  |  |  |  |  |  |
|    | Boiler Room                              |  |  |  |  |  |  |  |  |
|    | P.C.B. Capacitors                        |  |  |  |  |  |  |  |  |
|    | Cooling Towers                           |  |  |  |  |  |  |  |  |
|    | Chemical Fill Station                    |  |  |  |  |  |  |  |  |
|    | Move Crew Dock                           |  |  |  |  |  |  |  |  |

#### G-5 SEPARATION OF INCOMPATIBLE WASTE DURING SPILL CLEAN-UP

Spills occurring in normal storage areas are contained by trenches protecting the room entrances. These trenches drain to separate underground containment tanks for treatment. Spills occurring outside the normal storage areas are contained by the use of clay absorbant materials which are stored in emergency spill drums (drum locations are listed on Page 161).



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### Midway Facility Checklist

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
| 1. Emergency Spill Drums<br>Minnehaha Avenue |  |  |  |  |  |  |  |  |  |
| P.C.B. Capacitors                            |  |  |  |  |  |  |  |  |  |
| Tank Farm                                    |  |  |  |  |  |  |  |  |  |
| Boiler Room                                  |  |  |  |  |  |  |  |  |  |
| Maintenance Oil Storage                      |  |  |  |  |  |  |  |  |  |
| Flammable Storage Room                       |  |  |  |  |  |  |  |  |  |



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|                    | Emergency Response Procedure  |          | 265, 761             |
| ENGINEER           | DATE                          | APPROVAL | DATE                 |
| D. E. MacDonald    |                               |          |                      |

### REMEDIAL ACTION LOG

| NO. | PROBLEM<br>OBSERVATION | INI | REMEDIAL<br>ACTION | INI | DATE |
|-----|------------------------|-----|--------------------|-----|------|
| 1.  |                        |     |                    |     |      |
| 2.  |                        |     |                    |     |      |
| 3.  |                        |     |                    |     |      |
| 4.  |                        |     |                    |     |      |
| 5.  |                        |     |                    |     |      |
| 6.  |                        |     |                    |     |      |
| 7.  |                        |     |                    |     |      |
| 8.  |                        |     |                    |     |      |
| 9.  |                        |     |                    |     |      |
| 10. |                        |     |                    |     |      |
| 11. |                        |     |                    |     |      |
| 12. |                        |     |                    |     |      |
| 13. |                        |     |                    |     |      |
| 14. |                        |     |                    |     |      |



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## ENVIRONMENTAL CONTROL PROCEDURE

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| ENGINEER  | DATE | APPROVAL | DATE                             |
| D. E. MacDonald   |      |          |                                  |

### 1.0 General Information

- 1.1 The Chemical and Hazardous Material Emergency Response Procedure incorporates the following security procedures:

- SM-5.1.2 Emergency Action Plan
- SM-5.2.4 Emergency Contingency Procedure  
Emergency Brigade
- SM-5.4.8 Emergency Contingency Procedure  
Fire Evacuation

- 1.2 These are the procedures which identify the method of plant evacuation, the alarm system and the training requirements of the emergency brigade personnel.



## SECURITY MANUAL

| TITLE  | SUPERSEDES | NUMBER         |
|--|------------|----------------|
|  | ISSUE DATE | EFFECTIVE DATE |
| EMERGENCY CONTINGENCY PROCEDURE<br>EMERGENCY BRIGADE | 06/01/84   | SM-5.2.4       |
|  | 02/01/85   | 02/01/85       |

### I. PURPOSE

- A. Sperry Defense Products Group, Computer Systems Division (CSD) Emergency Brigade is established to provide an organization which will respond to any emergency constituting a threat to CSD.

In order, Brigade responsibilities are to:

1. Assist in evacuating or protecting employees.
  2. Assist public emergency forces as needed or to protect company property pending arrival of public emergency forces.
  3. Anticipate problems and request preventive action where the potential for problems exists.
- B. To accomplish this, Emergency Brigade members are trained and familiarized with a common plan. Training will consist of actual demonstrations, periodic drills, review of education material, First Aid, CPR and fire fighting equipment.

### II. SCOPE

This procedure applies to all CSD Facilities in the Twin City/ Metropolitan area.

### III. RESPONSIBILITY

#### A. Emergency Coordinator

It is the responsibility of the Emergency Coordinator to assure:

1. The existence and training of the Emergency Brigade.
2. The exercise of periodic evacuations and drills.
3. That management is informed of potential emergency situations and/or corrective action required to meet an emergency.
4. To assure that coordination is maintained with community agencies that might be called in an emergency.

#### B. Emergency Coordinator - Alternate

The alternate to the Emergency Coordinator will assist in the performance of the Emergency Coordinator's duties and assure Brigade responsibilities.

C. Facility Brigade Captains

It is the responsibility of the Facility Brigade Captains to:

1. Notify the Emergency Coordinator of potential hazard areas in his/her facility.
2. Assure the staffing and direction of the Facility Brigade by verifying the availability of members once a month and appointing replacements where necessary.
3. Implement drills as requested by the Emergency Coordinator.
4. Serve in liaison with the Emergency Coordinator, Emergency Brigade members, Civil Emergency Organizations, and Facilities service functions in an emergency situation.

D. Alternate Facility Captains

It is the responsibility of the Facility Brigade Captain Alternate to act in the absence of the Facility Brigade Captain and to assist in the exercise of the responsibilities.

E. Emergency Brigade Members

It is the responsibility of the individual Emergency Brigade member to:

1. Be familiar with his/her area, its potential hazards, use of emergency equipment and alarm procedures so that he/she can respond positively in an emergency.
2. Notify the Facility Captain of potential problems or hazards in his/her area such as lack of or improper extinguishers, excessive accumulation of waste, or blocked exits.
3. Participate in Emergency Brigade drills or training sessions.
4. Serve in a liaison capacity between Facility Brigade Captains and area supervisory personnel.
5. Assure the orderly movement or evacuation of area personnel in a drill or emergency situation.
6. Assist in the protection of company property according to instructions from Facility Brigade Captains in an actual emergency situation.



## SECURITY MANUAL

| TITLE  | SUPERSEDES | NUMBER         |
|--|------------|----------------|
|  | ISSUE DATE | EFFECTIVE DATE |
| EMERGENCY CONTINGENCY PROCEDURE<br>FIRE EVACUATION | 06/01/84   | SM-5.4.8       |
|  | 02/01/85   | 02/01/85       |

### I. PURPOSE

To establish an orderly evacuation procedure in case of fire or bomb threat.

### II. SCOPE

This procedure applies to all Sperry Defense Products Group, Computer Systems Division (CSD) locations in the Twin City/Metropolitan area.

### III. GENERAL

- A. TO REPORT A FIRE: (24 hours a day, 7 days a week), AT ALL FACILITIES DIAL 3000. This number gives you the Facility telephone operator, the nurse, and the main guard post.
- B. Fire is usually the cause or present at any major emergency or disaster. The possibility of serious fires is reduced by the installation of proper fire protection equipment, good housekeeping and fire prevention practices, but the proper and quick response at the time a fire is first discovered is the most effective means of reducing loss or injury to personnel.
- C. When telephoning, report the nature and location of the fire to the guard by grid locations, such as the mail station. He/she will initiate the facility evacuation siren and call the Fire Department.
- D. If for some reason operators or guards cannot be reached, telephone the Fire Department, using the emergency 911 system.
- E. Emergency Brigade Action
  1. Initiation of an evacuation for fire will be by continuous sounding of the siren. Termination will be announced by two short signals of the fire siren.
  2. The Emergency Coordinator will proceed to the area of emergency. The Facility Brigade Captain and Alternate will report to the main Facility lobby.
  3. Facility medical, safety, and designated Facility maintenance or service-area personnel will report to the Facility Brigade Captain in the lobby.



4. Emergency Brigade members will report to their pre-assigned post and assist in the orderly evacuation of personnel. Hard hats are to be worn to identify Emergency Brigade members to evacuating personnel.
5. When his/her area is evacuated the Emergency Brigade members will notify the Captain by the most expeditious means and be available for additional services as required. He/she will also notify the Captain of any special emergency or hazard to personnel.
6. Brigade members after evacuation of personnel may attempt to extinguish or confine fires pending arrival of the Fire Department if such action does not constitute hazard to the member.
7. Emergency Brigade members not in the area of fire may be directed by Emergency Brigade Captain to assist in fire fighting or protecting equipment after their area is evacuated.
8. Upon arrival of the Fire Department, fire extinguishing responsibilities will be turned over to firemen unless the assistance of Emergency Brigade members is requested.
9. Emergency Brigade members shall watch for problems encountered in the course of an evacuation drill and report them to the Facility Brigade Captain for corrective action.

#### IV. GENERAL INSTRUCTIONS TO BE GIVEN EMPLOYEES

Prior to initiation of drills, Emergency Brigade member should notify employees how to report a fire, of the exits to be used in evacuating their areas, the method used to announce drills, and what their conduct should be in a drill/evacuation.

The following guides should be followed in instructing employees how to conduct themselves in a fire drill.

1. Stop work immediately.
2. Turn off sources of power to machines and other electrical equipment.
3. Store government classified information in proper containers. If taking time to store material presents a hazard to the employee, classified information may be carried with the employee until suitable storage can be found. If neither of the above can be done, notify the facility guard.
4. Proceed through the nearest emergency exit quickly and quietly. DO NOT RUN!

5. Once outside move a sufficient distance from the exit (approximately 300 feet) to permit all employees to exit and wait for instructions from supervisors, or, in case of drill, notification that drill is terminated.
6. If returning to facility, use the same entrance you exited from.
7. Remain in assembly area until signaled to return, are dismissed, or given additional instruction from your supervisor.
8. DISPLAY BADGES UPON RE-ENTRY.

V. SPECIAL RESPONSIBILITIES

A. Supervisory Personnel

1. On a continuing basis, notify area Emergency Brigade members of any problems or special hazard in their area involving his/her personnel or material.
2. Upon initiation of a fire evacuation or drill, supervisor will assist Emergency Brigade members in assuring an orderly evacuation of employees under their responsibility.
3. Proceed with his/her employees to an area outside of the facility and assist in communicating instructions and/or control over subordinates.

B. Telephone Operators/Guards

Upon receipt of notification, telephone operators or guards will:

1. Sound the emergency facility fire alarm and call the Fire Department.
2. At the time of call, obtain information such as location, extent, and imminent danger that may arise from the fire.
3. Reject other incoming calls.
4. Maintain contact with Emergency Brigade Captains unless advised or required to evacuate.

C. Others

1. Nurses will report to the Facility Emergency Brigade Captain.
2. Contact Electric Company representatives will report for instructions to the Emergency Brigade Captain in the Facility lobby.
3. Lead maintenance personnel will report to the Facility Emergency Brigade Captain at the Facility lobby.

SM-5.4.8

3 of 3



## SECURITY MANUAL

| TITLE                 | SUPERSEDES | NUMBER         |
|-----------------------|------------|----------------|
|                       | ISSUE DATE | EFFECTIVE DATE |
| EMERGENCY ACTION PLAN | 06/01/84   | SM-5.1.2       |
|                       | 02/01/85   | 02/01/85       |

### I. PURPOSE

- A. Sperry Defense Products Group, Computer Systems Division (CSD) has established contingency procedures to be followed in the event of major business interruptions due to any unforeseen disasters such as: Fire, tornado, storms, explosion, etc.

NOTE: The following procedures cover related disaster contingency plans:

Emergency Facility Closings Procedure - SM-4.6.20  
Emergency Brigade Procedure - SM-5.2.4  
Contingency Plan for Vital Records  
Bomb Threats - SM-5.6.18  
Tornado/Severe Weather - SM-5.6.16  
Fire Evacuation - SM-5.4.8  
Disaster Plan - SM-5.6.14  
Fire Prevention Plan - SM-5.3.6

### II. SCOPE

This Procedure applies to all CSD locations in the Twin Cities/Metropolitan Area.

### III. GENERAL

- A.
1. In emergency life threatening situations during a fire, Sperrys' primary concern is "Life Safety" and to evacuate to a safe place all occupants of the threaten facility.
  2. The Emergency Brigade in each facility has escape route assignments at hallway intersections, and exit doors and act under the direction of their facilities captain.
  3. Evacuation route maps are posted in each facility.
  4. A fire alarm system is located in each facility.
  5. Unless life threatening, all large electrical equipment shall be shut off as personnel are exiting.
- B. Emergency Assistance
1. To report a fire: dial 3000 (24 hours a day, 7 days a week). This number will give you the facilities telephone operator, the nurse and the main guard post.

### III. GENERAL (Continued)

2. When phoning, report the nature and location of the fire to the guard by grid location, such as the mail station. The guard will initiate the facility evacuation siren and call the Fire Department.
3. If for some reason operators or guards cannot be reached, phone the Fire Department direct by calling 911 or 224-7371 (St. Paul), 454-3700 (Eagan), or 451-1818 (Mendota Heights).
4. Notify your supervisor of emergency if possible.

#### C. Emergency Evacuation

1. Employees who are not members of the Emergency Brigade and are not involved in the emergency will follow the instructions of their supervisor to:
  - (A) Evacuate the building and assemble a minimum of 300 feet away from the site and report to their supervisor or alternate.
  - (B) All visitors will be escorted out of the building to a safe area. Emergency Brigade will assist handicapped employees to evacuate facility.

NOTE: The Emergency Brigade will provide for the safe and expeditious evacuation of all building occupants due to an actual or potential life threatening condition.

2. All exits are identified as required by law.

#### D. Fire Control and Rescue

1. The control or suppression of fires is our secondary concern and will be manned by members of the Emergency Brigade using portable extinguishers and fire hoses on "Incipient type" fires only. Training on portable extinguishers is on an annual basis for the Emergency Brigade members.
2. All other building occupants will leave the area.

#### E. Assistance to Ill or Injured

Depending on circumstances:

1. Injury - Do not move unless to prevent additional exposure or injury.
2. Illness - Make comfortable until medical aid arrives.

III. GENERAL (Continued)

NOTE: All Facilities Protection personnel are trained:

1. First Aid
2. Cardiopulmonary Resuscitation (CPR)
3. Fire suppression
4. Self Contained Breathing Appartus (SCBA)

Also a majority of the Emergency Brigade members are trained in the above mentioned subjects.

- F. For additional information or clarification of the Emergency Action Plan contact the Emergency Coordinator, Facilities Protection Department at Sperry Park (612) 456-4550.



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## ENVIRONMENTAL CONTROL PROCEDURE

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|--------------------|---|------|----------------------------------|
| DETAIL DESCRIPTION | Chemical & Hazardous Material<br>Emergency Response Procedure | REF  | 40 CFR 117, 263, 264<br>265, 761 |
| ENGINEER           | D. E. MacDonald   | DATE | APPROVAL                         |
|                    |   |      | DATE                             |

### APPENDICIES

- I. List of Available Personnel
- II. List of Agency and Emergency Telephone Numbers
- III. List of Available Equipment
- IV. Reportable Quantities of Various Chemicals
- V. Hazardous Material Incident Report Form
- VI. Emergency Information of Various Chemicals
- VII. Facility Lay-Outs



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| ENGINEER           | D. E. MacDonald   | DATE | APPROVAL                         |
|                    |   |      | DATE                             |

### Appendix I

#### A. Hazardous Material Emergency Coordinator

|               | <u>Home Ph.</u> | <u>Work Ph.</u> | <u>Pager</u> |
|---------------|-----------------|-----------------|--------------|
| Roger Martin  | non-responsive  | 456-4654        | 535          |
| Dan MacDonald | non-responsive  | 696-4714        | 915          |
| Mark Wilson   | non-responsive  | 456-4220        | 565          |
| Greg Weisjahn | non-responsive  | 456-2662        | 955          |

#### B. Hazardous Material Emergency Team

| <u>Environmental Management</u> | <u>Home Ph.</u> | <u>Work Ph.</u> | <u>Pager</u> |
|---------------------------------|-----------------|-----------------|--------------|
| Greg Grinols                    | non-responsive  | 456-4625        | 575          |
| Bill Polta                      | non-responsive  | 696-4639        | 905          |
| Roger Ranzau                    | non-responsive  | 696-4656        | 925          |
| Mike Medina (3rd shift)         | non-responsive  | 456-4625        | 565          |
| Mark Pierson (3rd shift)        |                 | 696-4639        | 935          |
| Bob Haselman (2nd shift)        | non-responsive  | 456-4625        | 575          |
| Joe Fitzgerald (2nd shift)      | non-responsive  | 696-4639        | 945          |
| Paul Skogquist                  |                 | 696-4639        |              |
| (Sat-Sun only - day shift)      |                 | or 456-4625     |              |

#### C. Hazardous Material Emergency Support

|                              |                |          |     |
|------------------------------|----------------|----------|-----|
| Occupational Health Programs |                |          |     |
| Roscoe Evavold               | non-responsive | 696-4150 |     |
| Ron Berndt                   | non-responsive | 696-4837 |     |
| John Davis                   | non-responsive | 696-4151 |     |
| Tim Morris                   | non-responsive | 456-2751 | 532 |
| Communications               |                |          |     |
| Mark Kessler                 | non-responsive | 456-4512 |     |
| Dick Nicholson               | non-responsive | 456-2001 | 683 |
| Emergency Brigade/Security   |                |          |     |
| Dick Herbst                  | non-responsive | 456-4549 | 518 |
| Jim Bailey                   | non-responsive | 456-4550 | 685 |
| Janitorial                   |                |          |     |
| Ralph Voight                 | non-responsive | 456-2179 | 697 |



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## ENVIRONMENTAL CONTROL PROCEDURE

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### C. Hazardous Material Emergency Support (continued)

|                     | <u>Home Ph.</u> | <u>Work Ph.</u> | <u>Pager</u> |
|---------------------|-----------------|-----------------|--------------|
| Maintenance         |                 |                 |              |
| Louie Handwerk (UP) | non-responsive  | 456-2307        | 689          |
| Jim Belisle (SR)    | non-responsive  | 696-4089        | 583          |



**ENVIRONMENTAL CONTROL PROCEDURE**

|                              |                               |     |
|------------------------------|-------------------------------|-----|
| DETAIL DESCRIPTION           | Chemical & Hazardous Material | REF |
| Emergency Response Procedure |                               |     |

|          |      |          |      |
|----------|------|----------|------|
| ENGINEER | DATE | APPROVAL | DATE |
|----------|------|----------|------|

## 2. Vacuum Cleaner

Wet or dry with 16 gallon tank.

Convert 'A' collar to adapt vacuum cleaner head to a 55 gallon drum.

Location: DI Pit

## 3. 1 1/2" Sandpiper Pump on Wheels

Location: DI Pit

**IV. OTHER SUPPLIES AVAILABLE****A. Chemicals**

1. Lime
2. Sodium bicarbonate
3. Oil absorbent
4. Sand
5. Chemical absorbent pillows

**B. Equipment Other Groups**

1. Communication Equipment
2. Portable fire extinguishers
3. Company trucks
4. Tractor with hydraulic hoist
5. Eyewash, portable
6. Gas pump plus hoses



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REF 40 CFR 117, 263, 264  
265, 761

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|-----------------|------|----------|------|
| ENGINEER        | DATE | APPROVAL | DATE |
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### Appendix II

#### Emergency Telephone Numbers

1. CHEMTREC (800) 424-9300
2. MPCA (Emergency Spill) 296-7373
3. EPA (Emergency Spill) (312) 896-7591
4. Coast Guard (Emergency Spill) (314) 622-4614
5. National Response Center (800) 424-8802
6. OHM Materials 935-4804
7. St. Paul Fire 224-7371
8. St. Paul Police 291-1234
9. St. Paul Ambulance 224-7371
10. Eagan Fire 454-3700
11. Eagan Police 454-3700
12. Hennepin County Poison Control Ctr.  
(24 Hr.) 347-3141
13. Union Carbide Hazardous Emergency (304) 744-3487  
(24 Hr.)
14. Linde Division Midwest Office (312) 454-2347  
(24 Hr.)
15. Bay West Inc. 770-3610



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### Appendix III

#### List of Available Equipment

#### I. INDIVIDUAL

- A. Chemical and Hazardous Material Emergency folder - one at work  
one at home
- B. Hazardous Material Data File

#### II. SHEPARD ROAD

- A. Safety Equipment Cabinets (2)
  - 1. Location: Both at L and R Aisles Intersection
  - 2. Contents (Cabinet #1):
    - a. Tool box with assorted tools, like crescent wrenches, pliers, screw drivers, flashlight and extra batteries.
    - b. 3 sets of hard hats with face shields.
    - c. 4 sets of protective chemical suits, which consist of jackets, bib overalls, and hoods.
    - d. 1-box of plug rugs, which consist of 4 pliable mats that are used to seal off floor drains.
    - e. 20 foot x 1/2 inch rope with clips on both ends.
    - f. Two 50 foot electrical extension cords.
    - g. 1 dozen rubber gloves.
    - h. 2-squeege's.
    - i. Shovel.
    - j. Vacuum tools.
    - k. Goggles and safety glasses.



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## ENVIRONMENTAL CONTROL PROCEDURE

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3. Contents (Cabinet #2):
  - a. Hoses for 1 1/2" Sandpiper pump
- B. Emergency Spill Cart
  1. Location: Waste Treatment Building
  2. Description and Contents;
    - a. Janitor type cart on four wheels to be used for small lab spills.
    - b. The cart contains: mop wringer and bucket, 25 gallon rigid liner for waste, coveralls and rubber boots in medium and large size, rubber gloves, safety glasses, clean-up neutralizing kits for caustic, acid and mercury spills, mop, lab broom, floor broom, whisk broom, dust pan and squeegee, also general purpose absorbent pads, chemical spill signs and protective barrier tape.
- C. Vacuum Cleaner, wet or dry, with 16 gallon tank.
  1. Location: Waste Treatment Building
  2. Convert 'A' collar to adapt vacuum cleaner head to a 55 gallon drum.
- D. 1 1/2" Sandpiper Pump on Wheels.
  1. Location: Waste Treatment Building
- E. Scott Breathing Apparatus
  1. Location:
- F. Emergency Spill Trailer
  1. Location: Outside Waste Treatment Building (north side)
  2. Contents:
    - a. Protective coveralls
    - b. Goggles
    - c. Rubber gloves
    - d. Large nonexplosive flashlights
    - e. Rope
    - f. Barrier tape
    - g. Overshoes



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## ENVIRONMENTAL CONTROL PROCEDURE

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- h. Dust masks
- i. Spare batteries for flashlights
- j. 1 1/2" sandpiper pump
- k. Two - 55 gallon spill drums
- l. Oil absorbent
- m. Drum cart
- n. Gass engine powered air compressor
- o. Hand pump for flammable liquids
- p. Suction and dispense hose for both airpump and handpump
- q. Crow bar
- r. Tool box with assorted tools
- s. Traffic cones
- t. Portable eye wash

### G. Emergency Spill Drums

#### 1. Locations:

Chemical Dock - Two Drums  
Tank Farm - Two Drums  
Boiler Room - One Drum  
P.C.B. Capacitors - One Drum  
One Powerline  
Pole, Northwest corner of lot.

#### 2. Contents:

Contain one bag of oil absorbent and one bag of absorbent pads, minimum.

## III. SPERRY PARK

### A. Safety Equipment Cabinets

- 1. Locations: One cabinet is located outside Environment Management Lab. The other one is located at top of stairs that leads to the CTC Labs.
- 2. Contents: Both cabinets have:
  - a. Tool box with assorted tools, like crescent wrenches, screw drivers, pliers, flashlite and extra batteries.
  - b. Two hard hats with faceshields.
  - c. Two sets of protective chemical suits, which consist of jackets, bib overalls, and hoods, each in medium and large size.



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## ENVIRONMENTAL CONTROL PROCEDURE

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- d. Two sets of one piece coveralls that are throw-aways, in medium and large size.
- e. 20 foot of 1/2 inch rope.
- f. Two 50 foot electrical extension cords.
- g. Rubber gloves.
- h. 2-squeegees.
- i. Shovel
- j. Goggles and safety glasses.

### B. Emergency Spill Cart

- 1. Location: Environmental Management Equipment Room
- 2. Description and Contents:
  - a. Janitor type cart on four wheels to be used for small lab spills.
  - b. The cart contains: mop, wringer and bucket, 25 gallon rigid liner for waste, coveralls and rubber boots in medium and large size, rubber gloves, safety glasses, clean-up neutralizing kits for caustic, acid and mercury spills, lab broom, floor broom, whisk broom, dust pan and squeegee, also general purpose absorbent pads, chemical spill signs and protective barrier tape.

### C. Vacuum Cleaner

- 1. Location: Environmental Management Equipment Room
- 2. Description:
  - a. Wet or dry with 16 gallon tank.
  - b. Convert 'A' collar to adapt vacuum cleaner head to a 55 gallon drum.

### D. 1 1/2" Sandpiper Pump on Wheels

- 1. Location: Environmental Management Equipment Room



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E. Scott Breathing Apparatus

1. Location: One near each safety cabinet and a third one is outside the double doors leading to the Environmental Management equipment room.

F. Emergency Spill Drums - Sperry Park

1. Locations:  
P.C.B. Capacitors - One Drum  
North side of building  
by entrance gate.  
Boiler Room - Two Drums  
Between Cooling - Two Drums  
towers.  
Chemical Fill - One Drum  
Move Crew Dock - Two Drums
2. Contents:  
Contain one bag of oil absorbent and one bag of absorbent pads,  
minimum.

IV. MIDWAY

A. Emergency Spill Drums

1. Locations:  
P.C.B. Capacitors - Two Drums  
North side of building,  
Driveway loop.  
Fuel Oil Tank Form - Two Drums  
Boiler Room - One Drum  
Maintenance Oil Storage Room - One Drum  
Flammable Storage Room - One Drum
2. Contents:  
Contain one bag of oil absorbent and one bag of absorbent pads,  
minimum.



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## ENVIRONMENTAL CONTROL PROCEDURE

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| D. E. MacDonald    |                               |          |                      |

### V. OTHER SUPPLIES AVAILABLE

#### A. Chemicals

1. Location: Chemical Storage Areas (Shepard Road and Sperry Park)
2. Content:
  - a. Lime
  - b. Sodium bicarbonate

#### B. Equipment Supplied by Other Groups

1. Communication Equipment - Guards
2. Portable fire extinguishers - Guards
3. Company trucks - Transportation
4. Tractor with hydraulic hoist - Maintenance
5. Eyewash, portable - Maintenance
6. Gas pump plus hoses - Maintenance





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## ENVIRONMENTAL CONTROL PROCEDURE

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|                    |   |      | DATE                             |

### APPENDIX IV

#### Reportable Quantities of Various Chemicals

|  |                     |
|--|---------------------|
| Acetic Acid, Glacial<br>Corrosive Material       | EPA min - 1000 lbs. |
| Butyl Acetate<br>Flammable liquid                | EPA min - 5000 lbs. |
| Calcium cyanide<br>Poison Class B                | EPA min - 10 lbs.   |
| Chromic Acid<br>Oxidizing material               | EPA min - 1000 lbs. |
| Chromic Acid<br>Corrosive material               | EPA min - 1000 lbs. |
| Carbolic Acid (Phenol), Liquid<br>Poison Class B | EPA min - 1000 lbs. |
| Caustic Soda (Liquid)<br>Corrosive material      | EPA min - 1000 lbs. |
| Caustic Soda (solid)<br>Corrosive material       | EPA min - 1000 lbs. |
| Copper Cyanide<br>Poison Class B                 | EPA min - 10 lbs.   |
| Cyanide of Potassium, Liquid<br>Poison Class B   | EPA min - 10 lbs.   |
| Cyanide of Potassium, Solid<br>Poison Class B    | EPA min - 10 lbs.   |
| Cyanide of sodium, liquid<br>Poison Class B      | EPA min - 10 lbs.   |
| Cyanide mixture, dry<br>Poison Class B           | EPA min - 10 lbs.   |
| Hydrochloric acid<br>Corrosive Material          | EPA min - 5000 lbs. |
| Hydrochloric Acid Mixtures<br>Corrosive Material | EPA min - 5000 lbs. |
| Hydrofluoric acid<br>Corrosive Material          | EPA min - 5000 lbs. |
| Mercury Compounds<br>Poison Class B              | EPA min - 1 lb.     |
| Naphtha<br>Flammable Liquid                      | EPA min - 5000 lbs. |
| Nitric acid solutions<br>Corrosive Materials     | EPA min - 1000 lbs. |
| Phosgene<br>Poison Class A                       | EPA min - 5000 lbs. |
| Sulfuric Acid<br>Corrosive Material              | EPA min - 1000 lbs. |



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|                  |                     |
|------------------|---------------------|
| Toluene          | EPA min - 1000 lbs. |
| Flammable Liquid |                     |
| Xylene           | EPA min - 1000 lbs. |
| Flammable Liquid |                     |

Sperry  
Defense Products Group  
Box 64525 - M.S. U1N14  
St. Paul, MN 55164  
ont (612) 456-4812

APPENDIX V  
HAZARDOUS MATERIAL INCIDENT  
REPORT FORM

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\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Facility Address Phone Number

\_\_\_\_\_  
Reported by Type of Incident (eg. Fire, Spill, Explosion)

\_\_\_\_\_  
Date of Incident Time of Incident

\_\_\_\_\_  
Chemical(s) Involved

\_\_\_\_\_  
Amount of Chemical(s)

\_\_\_\_\_  
Chemical Information

\_\_\_\_\_  
Coordinator

\_\_\_\_\_  
List of Personnel Involved

\_\_\_\_\_  
Steps taken to contain

\_\_\_\_\_  
Extent of Injuries

\_\_\_\_\_  
Explanation

\_\_\_\_\_  
Outside Organizations Notified:

\_\_\_\_\_  
Method of Clean Up

\_\_\_\_\_  
Estimated Quantity & Disposition of Material Recovered

\_\_\_\_\_  
Equipment Used

\_\_\_\_\_  
Date Equipment Cleaned & Replaced

\_\_\_\_\_  
essment of actual or potential hazards to human health of the environment, where applicable

\_\_\_\_\_  
Coordinator Signature  
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### APPENDIX VI

#### CORROSIVE

##### Definition:

A liquid or solid that causes visible destruction or irreversible damage to skin tissue at the point of contact, or that has a corrosion rate on steel.

Examples: Phosphorus pentachloride, solid; Potassium fluoride solution; Sulfuric Acid.

#### POTENTIAL HAZARDS

Fire-- May catch fire.

Health-- Vapors extremely irritating.

Contact may cause burns to skin and eyes. If inhaled, may be harmful.

Runoff may pollute water supply.

#### IMMEDIATE ACTION

Identify material involved.

Keep unnecessary people away.

Keep upwind, isolate hazard area.

Wear full protective gear.

#### IMMEDIATELY FOLLOW-UP ACTION

Fire-- Move containers from fire area if without risk.

Small fire-- Dry chemical or CO<sub>2</sub>.

Large fire-- Foam or water.

Cool containers with water from maximum distance until well after the fire is out.

#### SPILL or LEAK

Stop leak if without risk.

Do not touch spilled material.



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Small Spill-- Flush area with water

Large Spill-- Dilute with large amount of water and dike for later disposal.

### FIRST-AID

Remove contaminated clothing and shoes.

In case of contact with material immediately flush skin or eyes with running water FOR AT LEAST 15 MINUTES.

Keep patient warm and quiet.

Effects of contact or inhalation may be delayed.

Call physician.

### FLAMMABLE - COMBUSTIBLE

#### Flammable Liquid Definition:

Any liquid which under specified test procedures has a flashpoint of less than 100°F. (37.8°C).

Examples: Ether, Gasoline.

(Under new regulations Flammable placard may also signify Class C Explosives-- which are defined as manufactured articles which contain restricted quantities of Class A and/or Class B explosives as components and certain types of fireworks.)

#### Combustible Liquid Definition:

A liquid not meeting the definition of any other hazardous materials class having a flashpoint of 100°F. (37.8°C) or more and less than 200°F. (93°C).

Examples: Formaldehyde; Fuel oil, and Lube oil.

### POTENTIAL HAZARDS

Fire-- Highly flammable.

Flammable vapors may spread from spill.

Container may explode due to heat of fire.

Runoff may create fire or explosion hazard in sewer system.



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Health-- Vapors indoors may cause dizziness or suffocation.

Fire may produce irritating or poisonous gases.

### IMMEDIATE ACTION

Identify material involved.

Keep all unnecessary people away.

Keep upwind, isolate hazard area.

Eliminate all open flames; No smoking; No flares.

Evacuate by at least 2,000 feet.

### IMMEDIATE FOLLOW-UP ACTION

FIRE-- Small fire: Dry chemical, CO<sub>2</sub>, foam.

Large fire: Water spray, fog, or foam.

Move containers from fire area if without risk.

Cool containers with water from maximum distance until well after fire is out.

Stay away from ends of tank.

### SPILL or LEAK

Stop leak if without risk.

No flares, smoking, or flames in hazard area.

Use water spray to reduce vapors.

Large spills: Dike for later disposal, cover with foam.

Small spills: Take up with sand, earth, or other noncombustible absorbent material. Cover with foam for later disposal. (Foam is highly recommended, prevents re-ignition).

### FIRST-AID

Remove to fresh air.

Use standard first-aid procedures.



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### FLAMMABLE GAS

#### Definition:

Gas which is flammable or explosive under prescribed test procedures.

Examples: Acetylene, Hydrogen; Propane.

#### POTENTIAL HAZARDS

Fire-- May be ignited by heat, sparks, flames.

Flammable vapors may spread from spill.

Containers may explode due to heat of fire.

Gas explosion hazard indoors, or in sewers.

Health-- Contact with liquid may cause burns to skin and eyes.

Vapors indoors may cause dizziness or suffocation.

Fire may produce irritating or poisonous gases.

#### IMMEDIATE ACTION

If FLAME IMPINGEMENT occurs on the vapor space, withdraw immediately it will rupture within 10-15 minutes.

Identify material involved.

Eliminate all open flames. No smoking. No flares. Keep internal combustion engines at least 3000 feet away from vapor cloud.

Keep unnecessary people away.

Keep upwind, isolate the area.

Evacuate by at least 3,000 feet.

#### IMMEDIATE FOLLOW-UP ACTION

Fire-- Let burn unless leak can be stopped immediately.

Small fire: Dry chemical CO<sub>2</sub>.



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Large fire: Water Spray or fog.

Move containers from fire if without risk.

Cool containers with water from maximum distance until well after fire is out. (500 gallons/minute--minimum recommendation)

Stay away from ends of tanks.

Apply water to side of tanks.

Withdraw immediately in case of rising sound from venting safety device.

For massive fire in cargo area, use unmanned hose holder or monitor nozzles.

If this is impossible, withdraw from area and let fire burn.

### SPILL or LEAK

No flares, smoking, or flames in hazard area.

Stop leak if without risk.

Use water spray to reduce vapors.

Do not touch spilled liquid.

Isolate area until gas has dispersed.

### FIRST-AID

Remove to fresh air.

Use standard first-aid procedures.

### NON-FLAMMABLE GAS

#### Definition:

Gas which is hazardous by virtue of being under pressure, but which does not burn or explode under prescribed tests.

Examples: Helium; Oxygen; Sulfor dioxide; Argon; Nitrogen and Anyhdrous ammonia.





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### POTENTIAL HAZARDS

Fire-- May burn when subjected to intense heat.

Container may explode in heat or fire.

Health-- Runoff may pollute water supply.

Vapors extremely irritating.

Contact may cause burns to skin and eyes.

If inhaled, may be harmful.

### IMMEDIATE ACTION

Identify material involved.

Keep unnecessary people away.

Keep upwind, isolate hazard area.

Wear self-contained breathing apparatus and full protective gear.

If FLAME IMPINGEMENT occurs, withdraw immediately, it will rupture within 10-15 minutes.

### IMMEDIATE FOLLOW-UP ACTION

Fire-- Small fires: Dry Chemical or CO<sub>2</sub>.

Large fires: Water spray or fog.

Move containers from fire area if without risk.

Cool containers with water from maximum distance until well after fire is out.

### SPILL or LEAK

Do not touch spilled material.

Stop leak if without risk.

Use water spray to reduce vapors.

Isolate area until gas has dispersed.



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### FIRST-AID

Remove to fresh air. Call for emergency medical care.

If victim is not breathing, use resuscitation procedures. If the victim's heart has stopped beating, use CPR procedures.

If victim contacted material, immediately flush skin or eyes with running water FOR AT LEAST 15 minutes.

Remove contaminated clothing.

Keep victim warm and quiet.

### ORGANIC PEROXIDE

#### Definition:

A derivative of hydrogen peroxide in which part of the hydrogen has been replaced by an organic material.

Examples: Acetyl benzoyl peroxide; Benzoyl peroxide; Lauroyl Peroxide.

#### POTENTIAL HAZARDS

Fire-- May be ignited by heat, sparks, flames.

May ignite combustibles (wood, paper, oil, etc).

Container may explode in heat of fire.

May explode from friction, shock, heat or contamination.

Runoff to sewer may create fire or explosion hazard.

Health-- Contact may cause burns to skin and eyes.

Fire may produce irritating or poisonous gases.

#### IMMEDIATE ACTION

Identify material involved.

Keep unnecessary people away.

Keep upwind, isolate hazard area.

Wear full protective gear.



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### IMMEDIATE FOLLOW-UP ACTION

Fire-- Small fires: Dry chemical or CO<sub>2</sub>.

Large fires: Flood with water.

Cool containers with water from maximum distance until well after fire is out.

Fight fire from maximum distance.

For massive fire in cargo area, use unmanned hose holder or monitor nozzles.

Keep upwind, isolate hazard area.

Wear full protective gear.

### IMMEDIATE FOLLOW-UP ACTION

Fire-- Small fires: Dry chemical or CO<sub>2</sub>.

Large fires: Water spray or fog.

Move containers from fire area if without risk.

Cool containers with water from maximum distance until well after fire is out.

Fight fire from maximum distance.

For massive fire in cargo area, use unmanned hose holder or monitor nozzles.

### SPILL or LEAK

Stop leak if without risk.

Do not touch spilled material.

Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large spills: Dike for later disposal.

Small spills: Take up with sand, earth, or other noncombustible absorbent materials.

Sweep small dry spills into dry metal containers and keep tightly covered.



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### FIRST-AID

Remove to fresh air.

Call for emergency medical care.

Remove contaminated clothing and shoes.

In case of contact with material immediately flush skin or eyes with running water FOR AT LEAST 15 MINUTES.

Keep patient warm and quiet.

Effects of contact or inhalation may be delayed.

Use standard first-aid procedures.

### OXIDIZER

#### Definition:

A substance that yields oxygen readily to stimulate the combustion of certain other substances.

Examples: Ammonium nitrate, mixed fertilizer; Lead nitrate, Lead peroxide, Hydrogen Peroxide

#### POTENTIAL HAZARDS

Fire-- May ignite combustibles (wood, paper, oil, etc.).

Mixtures with fuels may explode.

Health-- Fire may produce irritating or poisonous gases.

#### IMMEDIATE ACTION

Identify material involved.

Keep unnecessary people away.



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### OXYGEN

#### Definition:

Oxygen (Pressurized Liquid) in contact with fuels, oils and other combustible materials can cause violent, rapid combustion or explosion. Sources of ignition, sparks, impacts, friction, or sudden shocks should be prevented in areas exposed to liquid oxygen spills or leakages.

#### POTENTIAL HAZARDS

Fire-- Materials may ignite in oxygen vapor.

Automobile engine will catch fire in oxygen atmosphere.

#### Explosion--

Container may explode due to heat of fire.

Mixtures with fuels may explode.

Gas explosion hazard indoors, outdoors or in sewers.

Health-- Contact with liquid may cause burns to skin and eyes.

#### IMMEDIATE ACTION

Identify material involved.

Wear full protective gear.

Eliminate all open flames; No smoking; No flares. Keep internal combustion engines away from vapor cloud area.

Evacuate by AT LEAST 2,000 FEET.

#### IMMEDIATE FOLLOW-UP ACTION

FIRE-- Small fires: Dry chemical or CO<sub>2</sub>.

Large fires: Foam or water.

Move containers from fire area if without risk.

Cool containers with water from MAXIMUM DISTANCE until well after fire is out.

For massive fire in cargo area, use unmanned hose holder or monitor nozzles. If this is impossible, withdraw from area and let fire burn.



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### SPILL or LEAK

Do not touch spilled liquid.

Stop leak if without risk.

Keep combustibles away from spilled material.

Isolate area until gas has dispersed.

### FIRST-AID

Remove victim to fresh air.

Remove contaminated clothes.

Use standard first-aid procedures.

### POISON B

#### Definition:

Poison B—liquids or solids (including pastes and semi-solids) known to be so toxic to man as to create a health hazard during transportation; or which are presumed to be toxic to man because of effects of laboratory animals.

Examples: Arsenic, some insecticides; Carbolic acid (phenol); cyanide

#### POTENTIAL HAZARDS

Fire-- May catch fire.

Health-- Liquids cause burns to skin and eyes. Absorption by clothes or shoes may cause delayed burns.

Vapors extremely irritating.

Vapors may be fatal if inhaled.

Runoff may pollute water supply.

#### IMMEDIATE ACTION

Identify material involved.

Keep unnecessary people away.



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Keep upwind, isolate hazard area.

Wear self-contained breathing apparatus, and full protective gear.

### IMMEDIATE FOLLOW-UP ACTION

Fire-- Small fires: Dry Chemical or CO<sub>2</sub>.

Large fires: Foam or water.

Move containers from fire area if without risk.

Cool containers with water if exposed to fire.

### SPILL or LEAK

Do not touch spilled liquid.

Stop leak if without risk.

Use water spray to reduce vapors.

Small spills: Take up with sand, earth or other non-combustible absorbent material.

### FIRST-AID

Remove victim to fresh air. Call for emergency medical care. Effects of contact or inhalation may be delayed.

If victim is not breathing, use resuscitation procedures. If the victim's heart has stopped beating, use CPR Procedures.

If victim contacted materials, immediately flush skin or eyes with running water FOR AT LEAST 15 MINUTES.

Remove contaminated clothing.

Keep victim warm and quiet.

Transmit with the victim the exact nature of the poison.

Hennepin County Poison Control Center (612) 347-3141 24 hrs.



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### POISON GAS

#### Definition:

Poison A--specifically enumerated gases or liquids of such nature that a small quantity of gas or the vapor is dangerous to life.

Examples: Phosgene, Cyanogen; Hydrocyanic acid, Phosphine, arsine, nitric oxide.

#### POTENTIAL HAZARDS

Fire-- May or may not catch fire

Explosion: Container may explode due to heat of fire.

Health-- Contact causes burns to skin and eyes.

Vapors may be fatal if inhaled.

Runoff may pollute water supply.

#### IMMEDIATE ACTION

Identify material involved.

Wear self-contained breathing apparatus and full protective gear.

Keep upwind, isolate hazard area.

Keep unnecessary people away.

#### IMMEDIATE FOLLOW-UP ACTION

Fire-- Move container from fire area if without risk.

Cool containers with water from maximum distance until after the fire is out.

Do not get water inside containers.

#### SPILL or LEAK

Do not touch spilled material.

Stop leak if without risk.

Use water spray to reduce vapors.





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Isolate area until it has dispersed.

Do not get water inside containers.

### FIRST-AID

Remove victim to fresh air. Call for emergency medical care.

If victim is not breathing, use resuscitation procedures. If victim's heart has stopped beating, use CPR procedures.

If victim contacted material, immediately flush skin or eyes with running water FOR AT LEAST 15 MINUTES.

Remove contaminated clothing.

Keep victim warm and quiet.

\*For detailed assistance in handling the hazard, call CHEMTREC (Chemical Transportation Emergency Center) toll free (800) 424-9300.

### RADIOACTIVE

#### Definition:

Substances which spontaneously emit radiation capable of penetrating and damaging living tissue and undeveloped film. Fissile radioactive materials are classified according to the controls required for nuclear criticality safety.

Examples: Cobalt 60; Gold 198; Iridium 192.

### POTENTIAL HAZARDS

Health-- Radiation hazard may be internal due to breathing vapor or dust, or contamination of skin, open cuts, etc.

Radiation hazard may be external (like X-Rays) from contamination on skin or exposure to unshielded material.

Prolonged exposure may be a threat to health or life.

Effects of radiation may be delayed.

Rotate personnel to cut down exposure time.



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### IMMEDIATE ACTION

Identify material involved.

Keep unnecessary people away.

Keep upwind, isolate hazard area.

Wear self-contained breathing apparatus and full protective gear.

Delay clean-up until arrival of qualified radiation monitoring assistance.

### IMMEDIATE FOLLOW-UP ACTION

Fire-- Small fires: Dry chemical or CO<sub>2</sub>.

Large fires: Foam or water.

Fight fire from maximum distance.

Move undamaged packages from fire area if without risk.

Do not move damaged packages.

### SPILL or LEAK

Do not touch spilled material or leaking or damaged packages.

Small spills: Take up with sand, earth, or other non-combustible absorbent material.

Large spills: Dike for later decontamination and disposal.

Do not enter spill area unless absolutely necessary to save life.

Limit entries to shortest time possible and record time to exposure.

Alternate persons for entry if possible.

### FIRST-AID

Call for emergency medical care.

Use standard first-aid procedures.

Remove contaminated clothing and shower thoroughly with soap and water.

Advise rescue personnel and physicians that persons or equipment may be radioactively contaminated.



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### ACETIC ACID, GLACIAL CORROSIVE MATERIAL

Acetic acid glacial is a clear, colorless liquid with a very strong irritating odor. It is not classed as a flammable liquid but will burn. Prolonged exposure of skin may result in burns. If temperature drops below 60°F may freeze.

If material on fire or involved in fire:

Use water in large quantities.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Do not deliberately ignite without proper authorization.

Build dikes to contain flow.

Keep material out of streams and sewers.

#### Personnel protection

Do not handle broken packages without protective equipment.

Wear protective gloves and safety glasses.

Use self-contained breathing apparatus.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

### ACETONE FLAMMABLE LIQUID

Acetone is a clear colorless liquid having a pleasant odor somewhat similar to wood alcohol. It is produced by the distillation of acetate of lime. It is used as a solvent in the manufacture of smokeless powder, lacquers, etc. It is very flammable, having a flash point below 20°F. Acetone is completely miscible with water. Fires involving the chemical can be flushed with large quantities of water as an effective extinguishing agent.

If material on fire or involved in fire:

Use water in large quantities, water fog or foam, but liquid water may be ineffective.

Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.



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### ACETYLENE FLAMMABLE COMPRESSED GAS

Acetylene is a flammable gas that has a rather wide "Flammability range" and for this reason it forms flammable mixtures with air over a much wider range of proportions than many other flammable gases. Acetylene becomes extremely dangerous if the gas alone is compressed under any ordinary conditions. Because of this, the D.O.T. Regulations authorize shipment only when gas is absorbed and compressed into a solvent (usually acetone) in cylinders that have been filled with some porous material. The D.O.T. Regulations require that the cylinder and filler comply with specified standards.

If material on fire or involved in fire:

Do not extinguish fire unless gas flow can be stopped.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Personnel protection:

Avoid breathing gas.

Evacuation:

If it appears that fire can be controlled, get away but don't evacuate-- put hoses on stands, etc.

### ACIDS, LIQUIDS, N.O.S. CORROSIVE MATERIAL

This may include a large number of very hazardous liquids. An attempt should be made to find out specifically what material is involved.

If material on fire or involved in fire:

Use water in large quantities.  
Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn or burns with difficulty.)  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.



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### Personnel Protection:

Do not handle broken packages without protective equipment.  
Avoid breathing vapors.  
Wear protective gloves and safety glasses.  
Wear self-contained breathing equipment.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### AIR COMPRESSED NONFLAMMABLE COMPRESSED GAS

Air compressed is ordinary air compressed to high pressure and shipped in steel cylinders. It has the same hazards in transportation as other combustible and nontoxic compressed gases.

#### If material is involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amounts of water.

### ALCOHOL, BUTYL FLAMMABLE LIQUID

Alcohol, butyl is a clear colorless liquid having an aromatic odor. It varies in composition and may or may not be classed as a flammable liquid depending on the flash point.

#### If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.  
Cool all affected containers with large amounts of water.

#### If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.



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### ALCOHOL, DENATURED FLAMMABLE LIQUID

Alcohol, denatured consists of ethyl alcohol to which some other substance has been added to render it unfit for use as a beverage. Various formulas for denaturing alcohol are authorized by the Internal Revenue Department. The flash point of denatured alcohol is commonly about the same as that of ethyl alcohol.

- If material on fire or involved in fire:

Use water in large quantities or water fog or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

### ALCOHOL, ETHYL FLAMMABLE LIQUID

Alcohol, ethyl is a clear colorless liquid of characteristic taste and odor. It is obtained by the fermentation of grains, starch, sugar or molasses. It has a flash point of approximately 55°F.

If material on fire or involved in fire:

Use water in large quantities, water fog or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.

### ALCOHOL, PROPYL FLAMMABLE LIQUID

Alcohol, Propyl is a clear colorless liquid having an odor similar to ethyl alcohol.

If material on fire or involved in fire:

Use water in large quantities, water fog or foam.  
Cool all affected containers with large amounts of water.



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If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.

### ALCOHOL, WOOD (METHANOL, METHYL ALCOHOL), FLAMMABLE LIQUID

Alcohol, wood (Methanol, methyl alcohol) is a clear colorless liquid of pleasant odor. It is obtained by the distillation of wood or is made from carbon monoxide and hydrogen. It mixes with water in all proportions, and has a flash point of about 45°F.

If material on fire or involved in fire:

Use water in large quantities, water fog or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.

### ALKALINE CAUSTIC LIQUIDS, N.O.S. CORROSIVE MATERIAL

Alkaline caustic liquids, n.o.s. are liquids which will cause damage to living tissue or will materially damage other freight. Most of them are water soluble and in case of spillage should be flushed away with large quantities of water. Great care should be taken to keep this material out of the eyes.

If material involved in fire:

Flood with water.  
Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)

If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.



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### Personnel Protection:

Do not handle broken packages without protective equipment.  
Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious amount of water or soap and water.

### AQUA AMMONIA SOLUTIONS CONTAINING ANHYDROUS AMMONIA NONFLAMMABLE COMPRESSED GAS

Aqua ammonia solutions containing anhydrous ammonia are usually fertilizer solutions containing free ammonia gas. When the absolute pressure exceeds 40 pounds per square inch at 70°F or 104 pounds per square inch at 130°F the solutions are classed as nonflammable compressed gases.

#### If material involved in fire:

Extinguish fire using suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amount of water.

#### If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

#### Personnel protection:

Avoid breathing vapors.  
Wear protective gloves and safety glasses.  
Wear self-contained breathing apparatus.

### ARGON NONFLAMMABLE COMPRESSED GAS

Argon is a colorless, odorless, incombustible gas obtained from the atmosphere. It is used in filling incandescent electric light globes and for most gas welding. It is shipped in steel cylinders, compressed to a pressure of about 1,800 pounds per square inch, when not liquefied.

#### If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amount of water.





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### Personnel Protection:

Do not breathe Argon. It can cause air hunger as it replaces oxygen.

### ARSINE

#### POISON GAS AND FLAMMABLE GAS

Arsine is a colorless highly toxic and flammable gas which acts as a blood and nerve poison. It may be fatal if inhaled, and may form explosive mixtures with air.

If material on fire or involved in fire:

Do not extinguish burning gas if flow cannot be shut off immediately.  
Keep all cylinders cool with large amounts of water.

If material not on fire or not involved in fire:

Evacuate area and keep personnel upwind.  
Use self-contained breathing apparatus and shut off leak if without risk.

Personnel protection:

Avoid breathing vapor.  
Wear full protective gear including self-contained breathing equipment.  
Get medical attention immediately if exposed to gas.

### BORON TRICHLORIDE

#### CORROSIVE

Boron Trichloride is a colorless, corrosive, toxic liquid which is shipped at its vapor pressure of 4 psi at 70°F. It causes burns on contact with eyes, skin and mucous membranes. It is a nonflammable gas.

If involved in fire:

Keep all cylinders cool with large amounts of water.

If not involved in fire:

Evacuate area and keep personnel upwind.  
Use self-contained breathing apparatus and protective clothing.  
Shut off leak if without risk.



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### Personnel protection:

Avoid breathing vapors.  
Wear full protective clothing and use self-contained breathing equipment.  
In case of contact flush with large amounts of water.  
Get medical attention immediately if exposed to gas.

### BUTYL ACETATE FLAMMABLE LIQUID

Butyl acetate is a clear, colorless liquid that has a pleasant fruit like odor. It may or may not be flammable under D.O.T. Regulations depending on purity, etc. The hazard is that of flammability.

#### If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.  
Liquid water may be ineffective.  
Cool all affected containers with large amounts of water.

#### If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

### CALCIUM CYANIDE POISON CLASS B

Calcium Cyanide is a grayish colored powder used principally as an insecticide. It is highly poisonous when taken internally and when exposed to air moisture it gives off hydrocyanic acid gas which is also poisonous.

#### If material on fire or involved in fire:

Use water in large quantities.  
Cool all affected containers with large amounts of water.

#### If material not on fire and not involved in fire:

Keep material out of streams and sewers.



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### Personnel protection:

Do not handle broken packages without protective equipment.  
Do not attempt to burn without proper authorization.  
Avoid breathing dust.  
Wear protective gloves and safety glasses.  
Wear self-contained breathing apparatus. Releases poisonous Hydrocyanic gas with acids.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### CARBOLIC ACID (PHENOL), LIQUID SOLID POISON CLASS B

Carbolic acid (phenol) is shipped either in solid form or in liquid form. Both forms have the very familiar strong odor of carbolic acid. It is poisonous and extremely irritating to tissue. In case of contact with clothing or body, wash with liberal quantities of soap and water. If severe or prolonged contact occurs, summon medical aid.

### If material on fire or involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn or burns with difficulty.)

### If material not on fire or involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

### Personnel protection:

Do not handle broken packages without protective equipment.  
Avoid breathing vapors.  
Wear full protective clothing.  
Wear self-contained breathing equipment when fighting fire.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### CAUSTIC SODA (LIQUID) CORROSIVE MATERIAL

Caustic soda (Liquid) consists of caustic soda (Sodium hydroxide) in water solution. The solutions are similar in physical properties to caustic potash, liquid.



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If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)

If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.  
Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious  
amounts of water or soap and water.

### CAUSTIC SODA, SOLID CORROSIVE MATERIAL

If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
Material itself does not burn.  
Avoid breathing fumes.

If material not involved in fire:

Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.  
Avoid breathing dusts.  
Wear protective gloves and safety glasses.

### CHLOROTRIFLUORETHYLENE (FREON) FLAMMABLE GAS

Chlorotrifluorethylene is a colorless, flammable toxic liquefied gas which is inhibited because of its extreme reactivity and tendency to polymerize.

If material on fire or involved in fire:

Do not extinguish burning gas if flow cannot be shut off immediately.  
Keep all cylinders cool with large amounts of water.



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If material not on fire or not involved in fire:

Evacuate area and keep personnel upwind.  
Use self-contained breathing apparatus and protective clothing and shut off leak if without risk.  
Keep sparks and flames away.

Personnel protection:

Avoid breathing vapor.  
Wear full protective gear and safety glasses.  
In case of contact, flush with large amounts of water.  
Get medical attention immediately if exposed to gas.

### CHROMIC ACID OXIDIZING MATERIAL

Chromic acid is in the form of reddish brown crystals. It is a strong oxidizing material, and when mixed with organic material produces heat, and may cause fire. It should therefore, be packed so as to avoid any possible contact with combustible materials.

Chromic acid, liquid, is a water solution of chromic acid, solid is very corrosive; spillage or fires involving the chemical should be flushed with large quantities of water.

If material on fire or involved in fire:

Use water in large quantities.

Personnel protection:

Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### CHROMIC ACID SOLUTION CORROSIVE MATERIAL

Chromic acid solution is a dark red liquid formed by dissolving solid chromic acid in water. There may be other acids, such as sulfuric, present also. In case of spillage flush with large quantities of water.



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If material involved in fire:

Use water in large quantities.

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)

Personnel protection:

Wear protective gloves and safety glasses.

Wash away any material which may have contacted body with copious  
amounts of water or soap and water.

### COMBUSTIBLE LIQUID, N.O.S. (FLASH POINT ABOVE 80°F BUT NOT EXCEEDING 150°F)

If material on fire or involved in fire:

Use water fog, foam, dry chemical or carbon dioxide.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Do not deliberately ignite without proper authorization.

### COMPRESSED GASES, N.O.S.

#### FLAMMABLE

A compress gas is defined as any material or mixture having in the container either an absolute pressure exceeding 40 pounds per square inch at 70°F, or an absolute pressure exceeding 104 pounds per square at 130°F, or both; or any liquid flammable material having a Reid vapor pressure exceeding 40 pounds per square inch absolute at 100°F.

If material on fire or involved in fire:

Do not extinguish fire unless gas flow can be stopped.

Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Do not deliberately ignite without proper authorization.

Do not use explosives on bulk containers without proper authorization.

Do not puncture bulk containers with rifle bullets.

Build dikes to contain flow.

Keep material out of streams and sewers.



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### Evacuation:

If it appears that fire can be controlled, get away but don't evacuate--put hoses on stands, etc.

If large quantities involved, evacuate for radius of 1500 feet if fire becomes uncontrollable.

### COMPRESSES GASES, N.O.S.

#### NONFLAMMABLE

A Compressed Gas is defined as any material or mixture having in the container either an absolute pressure exceeding 40 pounds per square inch at 70°F, or an absolute pressure exceeding 104 pounds per square inch at 130°F, or both; or any liquid flammable material having a Reid vapor pressure exceeding 40 pounds per square inch absolute in 100°F.

#### If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.

(Material itself does not burn or burns with difficulty.)

Cool all affected containers with large amount of water.

### COPPER CYANIDE

#### POISON CLASS B

Copper cyanide consists of a green powder. This material is much less poisonous than cyanides of sodium, potassium or calcium.

#### If materials involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.

(Material itself does not burn.)

Cool all affected containers with large amount of water.

#### If material not on fire and not involved in fire:

Build dikes to contain flow.

Keep material out of streams and sewers.

#### Personnel protection:

Do not handle broken packages without protective equipment.

Avoid breathing vapors.

Wear protective gloves and safety glasses.

Wear self-contained breathing equipment.

Wash away any material which may have contacted body with copious amounts of water or soap and water.



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### CYANIDE OF POTASSIUM, LIQUID POISON CLASS B

Cyanide of potassium, liquid is a water solution of cyanide of potassium.

If material involved in fire:

Use water in large quantities.  
Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amounts of water.

If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Do not allow cyanides to come in contact with acids.  
Wear self-contained breathing apparatus.  
Do not handle broken packages without proper protective equipment.  
Do not attempt to burn without proper authorization.  
Avoid breathing vapors or gases.  
Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### CYANIDE OF POTASSIUM, SOLID POISON CLASS B

Cyanide of potassium, solid, is in the form of a heavy white salt. It is highly poisonous, but not otherwise dangerous. It is used in recovering precious metals, in case hardening and electro-plating.

If material involved in fire:

Use water in large quantities.  
Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amounts of water.

If material not involved in fire:

Keep material out of streams and sewers.





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### Personnel protection:

Do not allow cyanides to come in contact with acids.  
Wear self-contained breathing apparatus.  
Do not handle broken packages without protective equipment.  
Avoid breathing dusts.  
Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### CYANIDE OF SODIUM, LIQUID POISON CLASS B

Cyanide of sodium, liquid, similar in properties to cyanide of potassium liquid.

#### If material involved in fire:

Use water in large quantities.  
Cool all affected containers with large amounts of water.

#### If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

### Personnel protection:

Do not allow cyanides to come in contact with acids.  
Wear self-contained breathing apparatus.  
Do not handle broken packages without protective equipment.  
Avoid breathing vapors.  
Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### CYANIDES OR CYANIDE MIXTURES, DRY POISON CLASS B

#### If material involved in fire:

Use water in large quantities.  
Avoid breathing fumes.  
Cool all affected containers with large amounts of water.

#### If material not involved in fire:

Keep material out of streams and sewers.



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### Personnel protection:

Do not allow cyanides to come in contact with acids.  
Wear self-contained breathing apparatus.  
Do not handle broken packages without protective equipment.  
Do not attempt to burn without proper authorization.  
Avoid breathing vapors or dusts.  
Wear protective gloves and safety glasses.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### DICHLOROSILANE FLAMMABLE GAS

Dichlorosilane is a highly flammable, toxic and corrosive gas. It causes severe burns on contact with eyes, skin and mucous membranes.

#### If material on fire or involved in fire:

Do not extinguish burning gas if flow cannot be shut off immediately.  
Keep all cylinders cool with large amounts of water.

#### If material not on fire or not involved in fire:

Evacuate area and keep personnel upwind.  
Use self-contained breathing apparatus and protective clothing and shut off leak if without risk.  
Keep sparks and flames away.

### Personnel protection:

Avoid breathing vapor.  
Wear full protective gear and safety glasses.  
In case of contact, flush with large amounts of water.  
Get medical attention immediately if exposed to gas.

### ETHER FLAMMABLE LIQUID

Ether is a clear, colorless, highly volatile and flammable liquid. It has a peculiar pungent odor, boils at temperature of 97°F and has a flash point below 0°F. It is made by treatment of alcohol with sulfuric acid. It is used medicinally as an anesthetic, technically as a solvent of fats, oils, rosins, etc. and mixed with alcohol as a solvent for nitrocellulose in the manufacture of smokeless powder.



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If material on fire or involved in fire:

Liquid water may spread fire.  
Use water fog, dry chemical, carbon dioxide or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Avoid breathing vapors.  
Wear protective gloves and safety glasses.  
Wear air-purifying gas mask.

Evacuation:

If it appears that fire can be controlled, get away but don't evacuate--put hoses on stands, etc.  
If large quantities involved, evacuate for radius of 1500 feet if fire (or polymerization reaction) becomes uncontrollable.

### ETHYL ACETATE FLAMMABLE LIQUID

Ethyl acetate is a clear, colorless volatile liquid of fragrant odor, used as a medicine, as a flavoring and as a solvent. It is very flammable, having a flash point of approximately 40°F.

If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep materials out of streams and sewers.



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### FLAMMABLE LIQUID, N.O.S.

Flammable liquid N.O.S.-- Any liquid not specifically shown, having a flash point of 80°F, or below, for purposes of transportation under D.O.T. Regulations as determined by the Tagliabue open cup test.

Try to ascertain the contents if not marked.

If material on fire or involved in fire:

Use water in large quantities, water fog, dry chemical, carbon dioxide, or foam.

Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

### FREON (TRICHLOROFLUOROMETHANE, TRICHLOROTRIFLUOROETHANE-TF)

#### ORM-A

Freon is a halogenated hydrocarbon which is colorless, nearly odorless heavy, non-flammable liquid.

If material involved in fire:

Cool all affected containers with large amounts of water.

If material not involved in fire:

Build dikes to contain flow.

Personnel protection:

Wear protective gloves and safety glasses.

Wash promptly upon skin contact.

Avoid breathing vapors.

### HEPTANE

#### FLAMMABLE LIQUID

Heptane is a clear, transparent, water-white liquid that is quite volatile. It is classed as a flammable liquid. The hazard in transportation is that of flammable liquid such as the petroleum or coal tar derivatives.



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If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.  
Do not extinguish fire unless flow can be stopped.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

### HELIUM NONFLAMMABLE COMPRESSED GAS

Helium is a colorless noncombustible and extremely stable gas. It is shipped in compressed condition and is classed as a nonflammable compressed gas.

If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amounts of water.

### HYDROCHLORIC ACID (MURIATIC ACID) CORROSIVE MATERIAL

Hydrochloric acid (Muriatic acid) is a corrosive liquid varying from colorless to yellow, according to purity. It gives off acid vapor of an irritating odor. It cannot be shipped in iron drums, and is commonly shipped in drums or tanks provided with acid-proof lining. This acid, as commonly shipped, is a water solution of the anhydrous hydrochloric acid gas. This acid does not cause fires, but will destroy many articles by contact.

If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)

If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.



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### Personnel protection:

Do not handle broken packages without protective equipment.  
Wear full protective clothing and self-contained breathing apparatus.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### HYDROCHLORIC ACIDS, ANHYDROUS NONFLAMMABLE COMPRESSED GAS

Hydrochloric acid, anhydrous is the dry hydrochloric acid gas which has been compressed to a liquid condition. Material is shipped in steel cylinders.

#### If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amounts of water.

### Personnel protection:

Avoid breathing vapors.  
Wear protective gloves and safety glasses.  
Wear full protective clothing and self-contained breathing apparatus.

### HYDROCHLORIC ACID MIXTURES CORROSIVE MATERIAL

Hydrochloric acid mixtures are liquids containing a considerable amount of hydrochloric acid mixed with water and other ingredients. Such mixtures are frequently used to clean metal and other surfaces.

#### If material on fire or involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn or burns with difficulty.)

#### If material not on fire and not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.



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### Personnel protection:

Do not handle broken packages without protective equipment.  
Wear full protective clothing and self-contained breathing apparatus.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### HYDROGEN FLAMMABLE COMPRESSED GAS

Hydrogen is a colorless flammable gas. It is compressed to high pressures and shipped in steel cylinders or in tank cars. The gas has an extremely wide flammability range.

#### If material on fire or involved in fire:

Approach fires of hydrogen with extreme caution. May be highly explosive.  
Do not extinguish fire unless gas flow can be stopped.  
Cool all affected containers with large amounts of water.

#### If material not on fire or not involved in fire:

Keep sparks and flames away.  
Do not deliberately ignite without proper authorization.

### Personnel protection:

Do not attempt to burn without proper authorization.

### Evacuation:

If it appears that fire can be controlled, get away but don't evacuate--put hoses on stands etc.  
If large quantities involved, evacuate for radius of 2500 feet if fire becomes uncontrollable.

### LACQUER BASE LIQUID FLAMMABLE LIQUID

Lacquer base, liquid, consists of the usual ingredients of lacquer, but with less than the usual amount of solvent or thinner. The lacquer bases require thinning with more solvent or thinner before being used.



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If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.

### MERCURY COMPOUNDS POISON CLASS B

Mercury compounds---Practically all mercury compounds are classed as class B poisons, See Mercuric acetate to Mercury cyanide, inclusive of Commodity List, D.O.T. Regulations for these compounds.

If material on fire or involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn or burns with difficulty.)

If material not on fire and not involved in fire:

Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.  
Do not attempt to burn without proper authorization.  
Avoid breathing vapors or dusts.  
Wear protective gloves and safety glasses.  
Wear self-contained breathing apparatus when fighting fire.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### METHYL ETHYL KETONE FLAMMABLE LIQUID

Methyl ethyl ketone is a clear transparent liquid that has a rather pleasant odor. It is a flammable liquid under D.O.T. Regulations. The hazard is that of flammability and for practical purposes of transportation is similar to acetone.

If material on fire or involved in fire:

Use water in large quantities.  
Cool all affected containers with large amounts of water.





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If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Wear protective gloves and safety glasses.

### NAPHTHA NAPHTHA DISTILLATE FLAMMABLE LIQUID

Naphtha, naphtha distillate.--The term is commonly applied to petroleum distillates heavier than gasoline, but lighter than kerosene. However, the term may also be applied to other grades of petroleum distillates. Most of the material to which the term naphtha is applied is classed as a flammable liquid.

If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep materials out of streams and sewers.

### NEON GAS NONFLAMMABLE COMPRESSED GAS

Neon gas is a colorless, odorless incombustible gas that is extremely stable. It is shipped in steel cylinders.

If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Cool all affected containers with large amounts of water.



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### NITRIC ACID AND NITRIC ACID SOLUTIONS CORROSIVE MATERIALS

Nitric acid and nitric acid solutions are very corrosive liquids varying in concentration and color from almost water-white to red. Some nitric acids fume also if exposed to air. In addition to being corrosive as an acid, it is a very active oxidizing agent and may start fires on contact with combustible organic matter especially if such organic matter is porous and finely divided. This tendency to start fires on contact with organic matter increases with the increasing strength of acid.

The D.O.T. Regulations authorize the shipment of various strengths of nitric acid in metal and glass containers. Glass containers must be packed and cushioned in materials that do not react readily with the acid to start fires.

All strengths of nitric acid are extremely corrosive and harmful to human tissue and to many materials of commerce. In event of leakage, whether or not fire is involved, flush with large quantities of water.

#### If material involved in fire:

- Use water in large quantities.
- Cool all affected containers with large amounts of water.
- Reacts with many chemicals that may cause explosion.

#### If material not involved in fire:

- Build dikes to contain flow.
- Keep material out of streams and sewers.

#### Personnel protection:

- Do not handle broken packages without protective equipment.
- Avoid breathing vapors.
- Wear protective gloves and safety glasses.
- Wear self-contained breathing apparatus.

### OXYGEN NONFLAMMABLE COMPRESSED GAS

Oxygen is a colorless, odorless, incombustible gas, commonly obtained by separation from the atmosphere or by electrolysis of water. It is shipped compressed to a pressure of approximately 2,000 lbs. per sq. inch in steel cylinders.



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If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn but accelerates burning of combustible materials.)

Cool all affected containers with large amounts of water.

### PERMANGANATES, N.O.S. OXIDIZING MATERIAL

Permanganates, N.O.S. are similar in appearance and hazards to permanganate of potash.

If material involved in fire:

Use water in large quantities.

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)

Mixtures with some combustible materials may ignite spontaneously.

If material not involved in fire:

Keep material out of streams and sewers.

Personnel protection:

Wear protective gloves and safety glasses.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

### PETROLEUM DISTILLATE FLAMMABLE LIQUID

Petroleum distillate consists of the lighter distillates from petroleum and includes benzine and naphtha. These liquids generally have a flash point below 80°F.

If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.

Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.



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### PHOSGENE (DIPHOSGENE) POISON CLASS A

Phosgene (Diphosgene) at ordinary temperatures is a gas which at 47°F condenses to a colorless liquid or 1.38 specific gravity. Phosgene gas is highly toxic. It is used to some extent as a dye intermediate, and has also been used as a so-called poison gas in warfare.

If material involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Avoid breathing fumes.  
Cool all affected containers with large amounts of water.

If material not involved in fire:

Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.  
Do not attempt to burn without proper authorization.  
Avoid breathing vapors or gases. Highly toxic.  
Wear full protective gear including self-contained breathing equipment.

Evacuation:

If it appears that fire can be controlled, get away but don't evacuate--put hoses on stands, etc.  
If large leakage (no fire) involved, evacuate 2500 feet.

### PHOSPHINE POISON GAS AND FLAMMABLE GAS

Phosphine is a colorless, highly toxic, flammable gas which paralyzes the olfactory senses. May be fatal if inhaled and may form explosive mixtures with air.

If material on fire or involved in fire:

Do not extinguish burning gas if flow cannot be shut off immediately.  
Keep all cylinders cool with large amount of water.

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CYANIDE OF POTASSIUM, LIQUID  
POISON CLASS B

Cyanide of potassium, liquid is a water solution of cyanide of potassium.

If Material involved in Fire:

Use water in large quantities.

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn.)

Cool all affected containers with large amounts of water.

If Material not Involved in Fire:

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel Protection:

Do not allow cyanides to come in contact with acids.

Wear self-contained breathing apparatus.

Do not handle broken packages without protective equipment.

Do not attempt to burn without proper authorization.

Avoid breathing vapors or gases.

Wear protective gloves and safety glasses.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

CYANIDE OF POTASSIUM, SOLID  
POISON CLASS B

Cyanide of potassium, solid, is in the form of a heavy white salt. It is highly poisonous, but not otherwise dangerous. It is used in recovering precious metals, in case hardening and electro-plating.

If Material Involved in Fire:

Use water in large quantities.

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn.)

Cool all affected containers with large amounts of water.

If Material not Involved in Fire:

Keep material out of streams and sewers.

Personnel Protection

Do not allow cyanides to come in contact with acids.

Wear self-contained breathing apparatus.

Do not handle broken packages without protective equipment.

Avoid breathing dusts.

Wear protective gloves and safety glasses.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

CYANIDE OF SODIUM, LIQUID  
POISON CLASS B

Cyanide of sodium, liquid, similar in properties to cyanide of Po-



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If material not on fire or not involved in fire:

Evacuate area and keep personnel upwind.  
Use self-contained breathing-apparatus and shut off leak if without risk.  
Keep sparks and flames away.

Personnel protection:

Avoid breathing vapors.  
Wear full protective gear including self-contained breathing equipment.  
Wash away any material which may have contacted body with copious amounts of water.  
Get medical attention immediately if exposed to gas.

### PHOSPHOROUS PENTAFLUORIDE NONFLAMMABLE GAS

Phosphorous Pentafluoride is a colorless, highly toxic, highly corrosive, acid gas which is hydrolyzed by moisture to hydrogen fluoride and phosphoryl fluoride. It causes severe burns on contact with eyes, skin and mucous membranes.

If involved in fire:

Keep all cylinders cool with large amounts of water.

If not involved in fire:

Evacuate area and keep personnel upwind.  
Use protective clothing and self-contained breathing apparatus and shut off leak if without risk.

Personnel protection:

Avoid breathing or skin contact with gas.  
Wear full protective clothing and use self-contained breathing equipment.  
In case of contact flush with large amount of water.  
Get medical attention immediately if exposed to gas.  
Apply 0.2% Zephiran Chloride to exposed skin.

### POISONOUS LIQUIDS, N.O.S. POISON CLASS B

Try to ascertain exact content of material.



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If material on fire or involved in fire:

Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn or burns with difficulty.)  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.  
Do not attempt to burn without proper authorization.  
Avoid breathing vapors.  
Wear full protective gear including self-contained breathing equipment.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.

### SILANE GAS FLAMMABLE GAS

Silane is a colorless, spontaneously flammable gas under pressure. It reacts violently with heavy metal halides and free halogens other than hydrogen chloride. It is very toxic.

If material on fire or involved in fire:

Fire cannot be extinguished. Shut off gas flow if without risk.  
Keep all cylinders cool with large amounts of water.

If material not on fire or not involved in fire:

Evacuate area and keep personnel away.  
Shut off leak if without risk.

### SOLVENTS, N.O.S. FLAMMABLE LIQUID

Solvents include such flammable liquids as acetone, alcohol, ether, naphtha, etc. Solvents may have flash points above or below 80°F, according to their composition. If the flash point is 80°F or below the material is classed as a flammable liquid.



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If material on fire or involved in fire:

Use water in large quantities, water fog, dry chemical, carbon dioxide or foam.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

### SULFURIC ACID (OIL OF VITRIOL) CORROSIVE MATERIAL

Sulfuric acid (Oil of vitriol) is a heavy, oily, corrosive, odorless liquid. It varies from colorless to almost black, according to purity. Sulfuric acid will char wood or almost any organic matter on contact, but is unlikely to cause fire. It is largely used in the manufacture of chemicals, acids, fertilizers, explosives, and refining of oil. It is very corrosive and will cause serious burns on contact with the skin.

If material involved in fire:

Use water in large quantities from as far away as possible.  
Water will cause evolution of extreme heat and possibly small steam "explosives".  
Extinguish fire using agent suitable for type of surrounding fire.  
(Material itself does not burn.)  
Avoid breathing fumes.

If material not involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.  
Wear protective gloves and safety glasses.  
Wear full protective clothing.  
Wash away any material which may have contacted body with copious amounts of water or soap and water.





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### TOLUENE (TOLUOL) FLAMMABLE LIQUID

Toluene (Toluol) is a distillate from coal tar and is also made synthetically. It resembles benzol in color and appearance, but is somewhat heavier and less volatile. It is used in manufacture of explosives. It has a flash test of about 55°F.

If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide or foam.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Wear self-contained breathing apparatus.

### TRICHLOROETHANE (METHYL CHLOROFORM) ORM-A

Trichloroethane is a colorless, heavy, liquid which is nonflammable with a mild chloroform like odor. It is moderately toxic by inhalation.

If material on fire or involved in fire:

Cool all affected containers with large amounts of water.

If material not on fire or involved in fire:

Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

Wear protective gloves and safety glasses.  
Wash promptly upon skin contact.  
Avoid breathing vapors.



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### TRICHLOROETHYLENE

#### ORM-A

Trichloroethylene is a colorless liquid with a sweet odor like chloroform. It boils at 188°F and is a heavy liquid. Is highly toxic by inhalation and moderately by ingestion and skin absorption.

If material on fire or involved in fire:

Avoid fumes, gives off phosgene when burning which is highly toxic.  
Cool all affected containers with large amounts of water.

If material not on fire and not involved in fire:

Build dikes and contain.  
Avoid breathing fumes.

Personnel protection:

Wear protective gloves and safety glasses.  
Wash promptly upon skin contact.

### XYLENE (XYLOL)

#### FLAMMABLE LIQUID

Xylol (xylene) is a coal tar distillate similar to toluol, but heavier and somewhat less flammable. The pure material has a flash point of 95°F and is not classed as a flammable liquid.

If material on fire or involved in fire:

Use water fog, dry chemical, carbon dioxide, or foam.  
Cool all affected containers with large amount of water.

If material not on fire and not involved in fire:

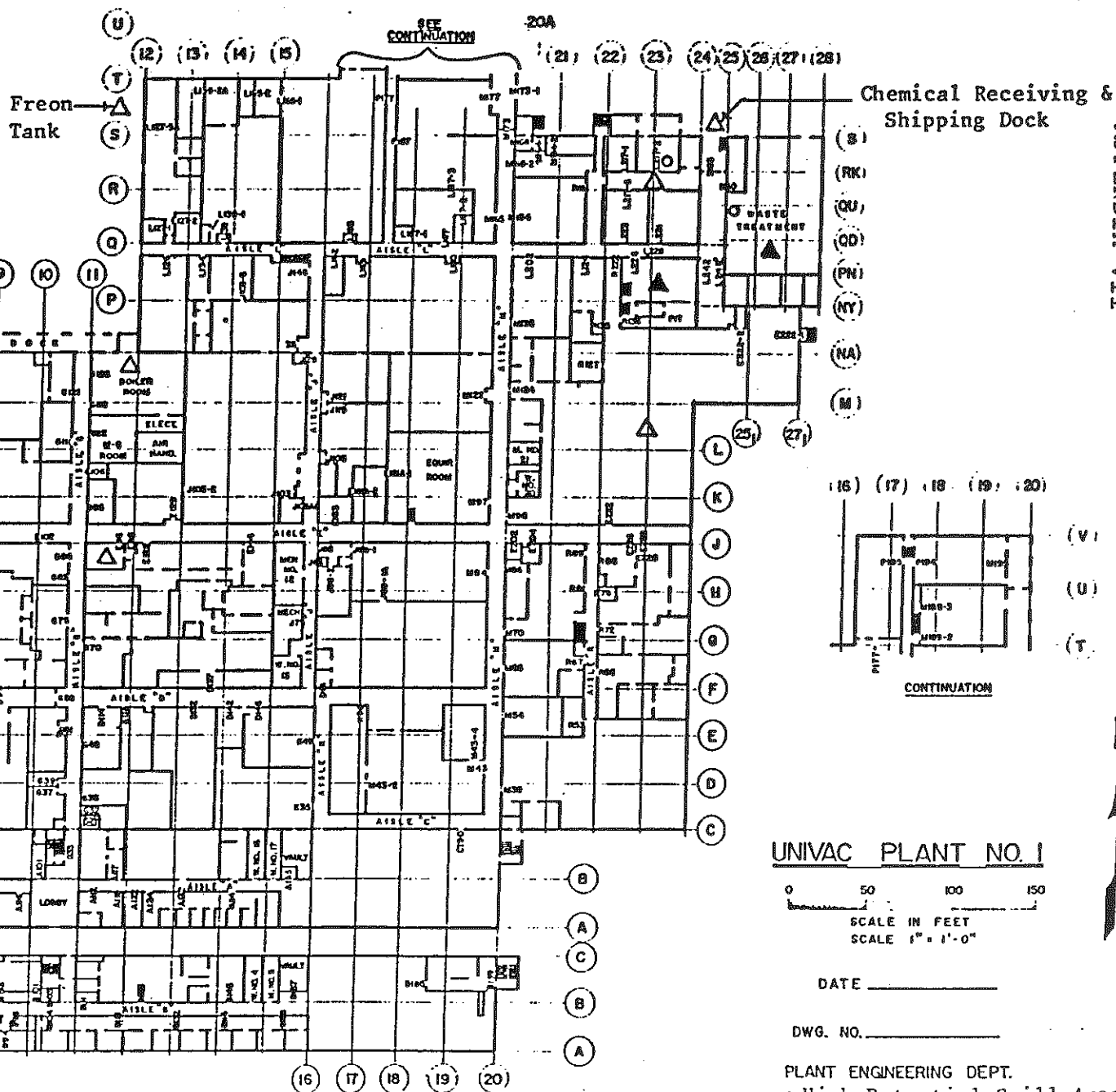
Keep sparks and flames away.  
Build dikes to contain flow.  
Keep material out of streams and sewers.

Personnel protection:

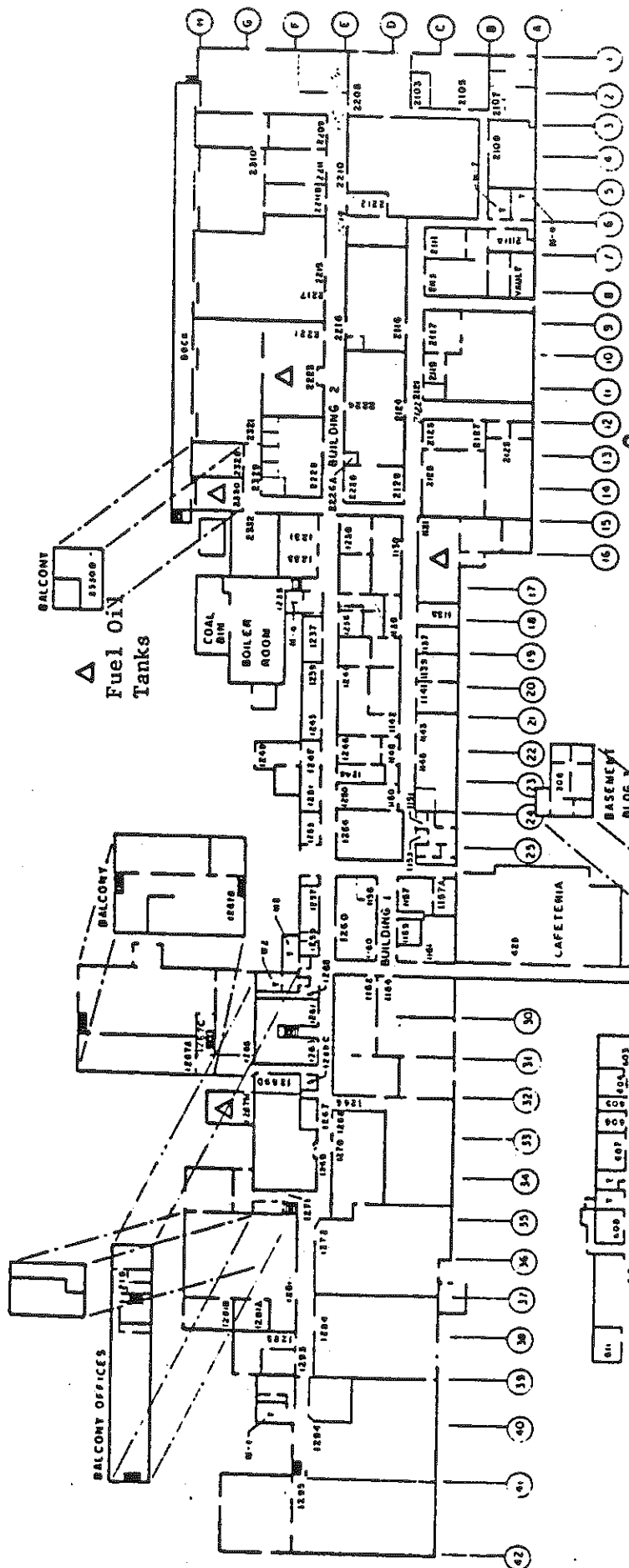
Wear self-contained breathing apparatus when fighting fire.

Power Pole

Fuel Oil Tanks





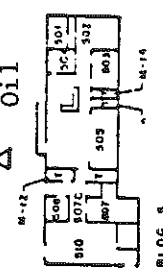


△ Potential Spill Areas  
 ○ Drums with chemical absorbant

UNIVAC  
 PLANT NO. 2

SCALE 0 30 60 120  
 DATE  
 DWG. NO. 2-03-00-01  
 PLANT ENGINEERING DEPT.

△ Crankcase Oil



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fire. (Material itself does not burn.)

Cool all affected containers with large amounts of water.

Personnel Protection:

Avoid breathing vapors.

Wear protective gloves and safety glasses.

Wear full protective clothing and self-contained breathing apparatus.

HYDROCHLORIC ACID MIXTURES

CORROSIVE MATERIAL

Hydrochloric acid mixtures are liquids containing a considerable amount of hydrochloric acid mixed with water and other ingredients. Such mixtures are frequently used to clean metal or other surfaces.

If Material on Fire or Involved in Fire:

Extinguish fire using agent suitable for type of surrounding Fire. (Material itself does not burn or burns with difficulty.)

If Material not on Fire and not involved in Fire:

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment. Wear full protective clothing and self-contained breathing apparatus.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

HYDROGEN

FLAMMABLE COMPRESSED GAS

Hydrogen is a colorless flammable gas. It is compressed to high pressures and shipped in steel cylinders or in tank cars. The gas has an extremely wide flammability range.

If Material on Fire or Involved in Fire:

Approach fires of Hydrogen with extreme caution. May be highly explosive.

Do not extinguish fire unless gas flow can be stopped.

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

Do not deliberately ignite without proper authorization.

Personnel Protection:

Do not attempt to burn without proper authorization.

Evacuation:

If it appears that fire can be controlled, get away but don't evacuate--put hoses on stands etc.

If large quantities involved, evacuate for radius of 2500 feet if fire becomes uncontrollable.

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION

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LACQUER BASE LIQUID  
FLAMMABLE LIQUID

Lacquer base, liquid, consists of the usually ingredients of lacquer, but with less than the usual amount of solvent or thinner. The lacquer bases require thinning with more solvent or thinner before being used.

If Material on Fire or Involved in Fire:

Use water fog, dry chemical, carbon dioxide or foam.

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

MERCURY COMPOUNDS  
POISON CLASS B

Mercury compounds---Practically all mercury compound are classed as class B poisons, See Mercuric acetate to Mercury cyanide, inclusive of Commodity List, D.O.T. Regulations for these compounds.

If Material on Fire or Involved in Fire:

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn or burns with difficulty.)

If Material not on Fire and not Involved in Fire:

Keep material out of streams and sewers.

Personnel Protection:

Do not handle broken packages without protective equipment.

Do not attempt to burn without proper authorization.

Avoid breathing vapors or dusts.

Wear protective gloves and safety glasses.

Wear self-contained breathing apparatus when fighting fire.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

METHYL ETHYL KETONE  
FLAMMABLE LIQUID

Methyl ethyl ketone is a clear transparent liquid that has a rather pleasant odor. It is a flammable liquid under D.O.T. Regulations. The hazard is that of flammability and for practical purposes of transportation is similar to acetone.

If Material on Fire or Involved in Fire:

Use water in large quantities

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

## ENVIRONMENTAL CONTROL PROCEDURE

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| DETAIL DESCRIPTION |      | REF      |      |
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## Personnel Protection:

Wear protective gloves and safety glasses.

NAPHTHANAPHTHA DISTILLATEFLAMMABLE LIQUID

Naphtha, naphtha distillate.--The term is commonly applied to petroleum distillates heavier than gasoline, but lighter than kerosene. However, the term may also be applied to other grades of petroleum distillates. Most of the material to which the term naphtha is applied is classed as a flammable liquid.

If Material on Fire or Involved in Fire:

Use water fog, dry chemical, carbon dioxide or foam.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

NEON GASNONFLAMMABLE COMPRESSED GAS

Neon gas is a colorless, odorless incombustible gas that is extremely stable. It is shipped in steel cylinders.

If Material Involved in Fire:

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn.)

Cool all affected containers with large amounts of water.

NITRIC ACID AND NITRIC ACID SOLUTIONSCORROSIVE MATERIALS

Nitric acid and nitric acid solutions are very corrosive liquids varying in concentration and color from almost water-white to red. Some nitric acids fume also if exposed to air. In addition to being corrosive as an acid, it is a very active oxidizing agent and may start fires on contact with combustible organic matter especially if such organic matter is porous or finely divided. This tendency to start fires on contact with organic matter increases with the increasing strength of acid.

The D.O.T. Regulations authorize the shipment of various strengths of nitric acid in metal and glass containers. Glass containers must be packed and cushioned in materials that do not react readily with the acid to start fires.

All strengths of nitric acid are extremely corrosive and harmful to human tissue and to many materials of commerce. In event of leak-



## ENVIRONMENTAL CONTROL PROCEDURE

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age; whether or not fire is involved, flush with large quantities of water.

If Material Involved in Fire:

Use water in large quantities.

Cool all affected containers with large amounts of water.

Reacts with many chemicals that may cause explosion.

If Material not Involved in Fire:

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel protection:

Do not handle broken packages without protective equipment.

Avoid breathing vapors.

Wear protective gloves and safety glasses.

Wear self-contained breathing apparatus.

OXYGEN

NONFLAMMABLE COMPRESSED GAS

Oxygen is a colorless, odorless, incombustible gas, commonly obtained by separation from the atmosphere or by electrolysis of water. It is shipped compressed to a pressure of approximately 2,000 lbs. per sq. inch in steel cylinders.

If Material Involved in Fire:

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn but accelerates burning of combustible materials.)

Cool all affected containers with large amounts of water.

PERMANGANATES, N.O.S.

OXIDIZING MATERIAL

Permanganates, N.O.S. are similar in appearance and hazards to permanganate of potash.

If Material Involved in Fire:

Use water in large quantities,

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn.)

Mixtures with some combustible materials may ignite spontaneously.

If Material not Involved in Fire:

Keep material out of streams and sewers.

Personnel protection:

Wear protective gloves and safety glasses.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

## ENVIRONMENTAL CONTROL PROCEDURE

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PETROLEUM DISTILLATE  
FLAMMABLE LIQUID

Petroleum distillate consists of the lighter distillates from petroleum and includes benzine and naphtha. These liquids generally have a flash point below 80°F.

If Material on Fire or Involved in Fire:

Use water fog, dry chemical, carbon dioxide or foam.

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

PHOSGENE (DIPHOSGENE)  
POISON CLASS A

Phosgene (Diphosgene) at ordinary temperatures is a gas which at 47°F. condenses to a colorless liquid or 1.38 specific gravity. Phosgene gas is highly toxic. It is used to some extent as a dye intermediate, and has also been used as a so-called poison gas in warfare.

If Material Involved in Fire:

Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn.)

Avoid breathing fumes.

Cool all affected containers with large amounts of water.

If Material not Involved in Fire:

Keep material out of streams and sewers.

Personnel Protection:

Do not handle broken packages without protective equipment.

Do not attempt to burn without proper authorization.

Avoid breathing vapors or gases. Highly toxic!

Wear full protective gear including self-contained breathing equipment.

Evacuation:

If it appears that fire can be controlled, get away but don't evacuate--put hoses on stands, etc.

If large leakage (No fire) involved, evacuate 2500 feet.

PHOSPHINE  
POISON GAS AND FLAMMABLE GAS

Phosphine is a colorless, highly toxic, flammable gas which paralyzes the olfactory senses. May be fatal if inhaled and may form explosive mixtures with air.

If Material on Fire or Involved in Fire:

Do not extinguish burning gas if flow cannot be shut off immediately.

**ENVIRONMENTAL CONTROL PROCEDURE**

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Keep all cylinders cool with large amount of water.  
 If Material not on Fire or not Involved in Fire:  
 Evacuate area and keep personnel upwind.  
 Use self-contained breathing apparatus and shut off leak if without risk.  
 Keep sparks and flames away.  
 Personnel Protection  
 Avoid breathing vapors.  
 Wear full protective gear including self-contained breathing equipment.  
 Wash away any material which may have contacted body with copious amounts of water.  
 Get medical attention immediately if exposed to gas.

PHOSPHOROUS PENTAFLUORIDE  
NONFLAMMABLE GAS

Phosphorous Pentafluoride is a colorless, highly toxic, highly corrosive, acid gas which is hydrolyzed by moisture to hydrogen fluoride and phosphoryl fluoride. It causes severe burns on contact with eyes, skin and mucous membranes.

If Involved in Fire:  
 Keep all cylinders cool with large amounts of water.  
 If not Involved in Fire:  
 Evacuate area and keep personnel upwind.  
 Use protective clothing and self-contained breathing apparatus and shut off leak if without risk.

Personnel Protection  
 Avoid breathing or skin contact with gas.  
 Wear full protective clothing and use self-contained breathing equipment.  
 In case of contact flush with large amounts of water.  
 Get medical attention immediately if exposed to gas.  
 Apply 0.2% Zephiran Chloride to exposed skin.

POISONOUS LIQUIDS, N.O.S.  
POISON CLASS B

Try to ascertain exact content of material.

If Material on Fire or Involved in Fire:  
 Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn or burns with difficulty)  
 Cool all affected containers with large amounts of water.  
 If Material not on Fire and not Involved in Fire:  
 Build dikes to contain flow.  
 Keep material out of streams and sewers.  
 Personnel Protection:  
 Do not handle broken packages without protective equipment.  
 Do not attempt to burn without proper authorization.

**ENVIRONMENTAL CONTROL PROCEDURE**

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Avoid breathing vapors.

Wear full protective gear including self-contained breathing equipment.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

SILANE GASFLAMMABLE GAS

Silane is a colorless, spontaneously flammable gas under pressure. It reacts violently with heavy metal halides and free halogens other than hydrogen chloride. It is very toxic.

If Material on Fire or Involved in Fire:

Fire cannot be extinguished. Shut off gas flow if without risk.

Keep all cylinders cool with large amounts of water.

If Material not on Fire or not Involved in Fire:

Evacuate area and keep personnel away.

Shut off leak if without risk.

SOLVENTS, N.O.S.FLAMMABLE LIQUID

Solvents include such flammable liquids as acetone, alcohol, ether, naphtha, etc. Solvents may have flash points above or below 80°F., according to their composition. If the Flash point is 80°F. or below the material is classed as a flammable liquid.

If Material on Fire or Involved in Fire:

Use water in large quantities, water fog, dry chemical, carbon dioxide or foam.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

SULFURIC ACID (OIL OF VITRIOL)CORROSIVE MATERIAL

Sulfuric acid (Oil of vitriol) is a heavy, oily, corrosive, odorless liquid. It varies from colorless to almost black, according to purity. Sulfuric acid will char wood or almost any organic matter on contact, but is unlikely to cause fire. It is largely used in the manufacture of chemicals, acids, fertilizers., explosives, and in refining of oil. It is very corrosive and will cause serious burns on contact with the skin.

If Material Involved in Fire:

Use water in large quantities from as far away as possible.

Water will cause evolution of extreme heat and possibly small steam "explosives".

## ENVIRONMENTAL CONTROL PROCEDURE

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Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn.)

Avoid breathing fumes.

If Material not Involved in Fire:

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel Protection:

Do not handle broken packages without protective equipment

Wear protective gloves and safety glasses.

Wear full protective clothing.

Wash away any material which may have contacted body with copious amounts of water or soap and water.

#### TOLUENE (TOLUOL)

#### FLAMMABLE LIQUID

Toluene (Toluol) is a distillate from coal tar and is also made synthetically. It resembles benzol in color and appearance, but is somewhat heavier and less volatile. It is used in manufacture of explosives. It has a flash test of about 55°F.

If Material on Fire or Involved in Fire:

Use water fog, dry chemical, carbon dioxide or foam.

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel Protection:

Wear self-contained breathing apparatus.

#### TRICHLOROETHANE (METHYL CHLOROFORM)

#### ORM-A

Trichloroethane is a colorless, heavy, liquid which is nonflammable with a mild chloroform like odor. It is moderately toxic by inhalation.

If Material on Fire or Involved in Fire:

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel Protection:

Wear protective gloves and safety glasses.

Wash promptly upon skin contact.

Avoid breathing vapors.

## ENVIRONMENTAL CONTROL PROCEDURE

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DATE

TRICHLOROETHYLENEORM-A

Thichloroethylene is a colorless liquid with a sweet odor like chloroform. It boils at 188°F. and is a heavy liquid. Is highly toxic by inhalation and moderately by ingestion and skin absorption.

If Material on Fire or Involved in Fire:

Avoid fumes, gives off phosgene when burning which is highly toxic.

Cool all affected containers with large amounts of water.

If Material not on Fire and not Involved in Fire:

Build Dikes and contain

Avoid breathing fumes.

Personnel Protection:

Wear protective gloves and safety glasses.

Wash promptly upon skin contact.

XYLENE (XYLOL)FLAMMABLE LIQUID

Xylol (xylene) is a coal tar distillate similar to toluol, but heavier and somewhat less flammable. The pure material has a flash point of 95°F. and is not classed as a flammable liquid.

If Material on Fire or Involved in Fire:

Use water fog, dry chemical, carbon dioxide or foam.

Cool all affected containers with large amount of water

If Material not on Fire and not Involved in Fire:

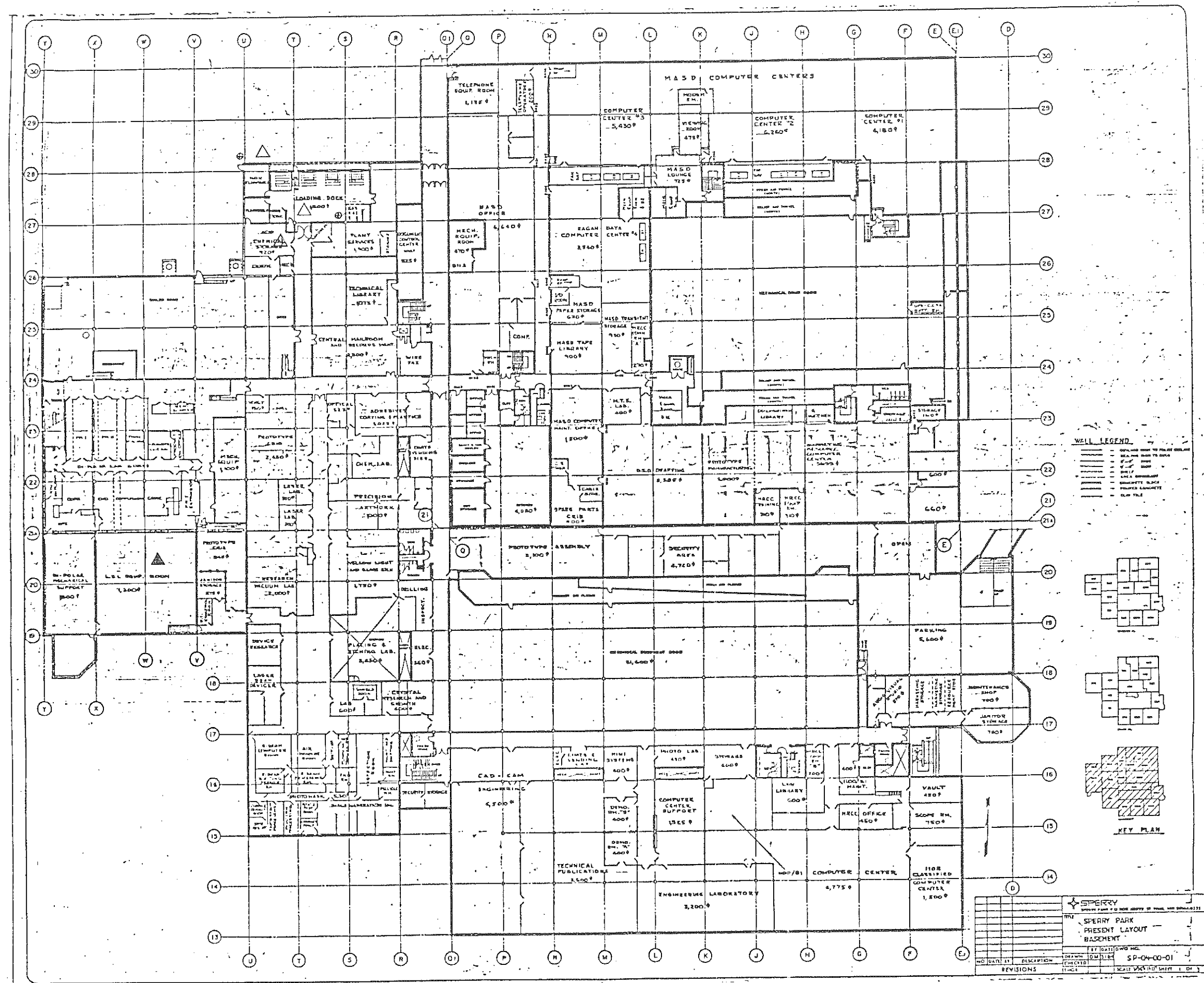
Keep sparks and flames away.

Build dikes to contain flow.

Keep material out of streams and sewers.

Personnel Protection:

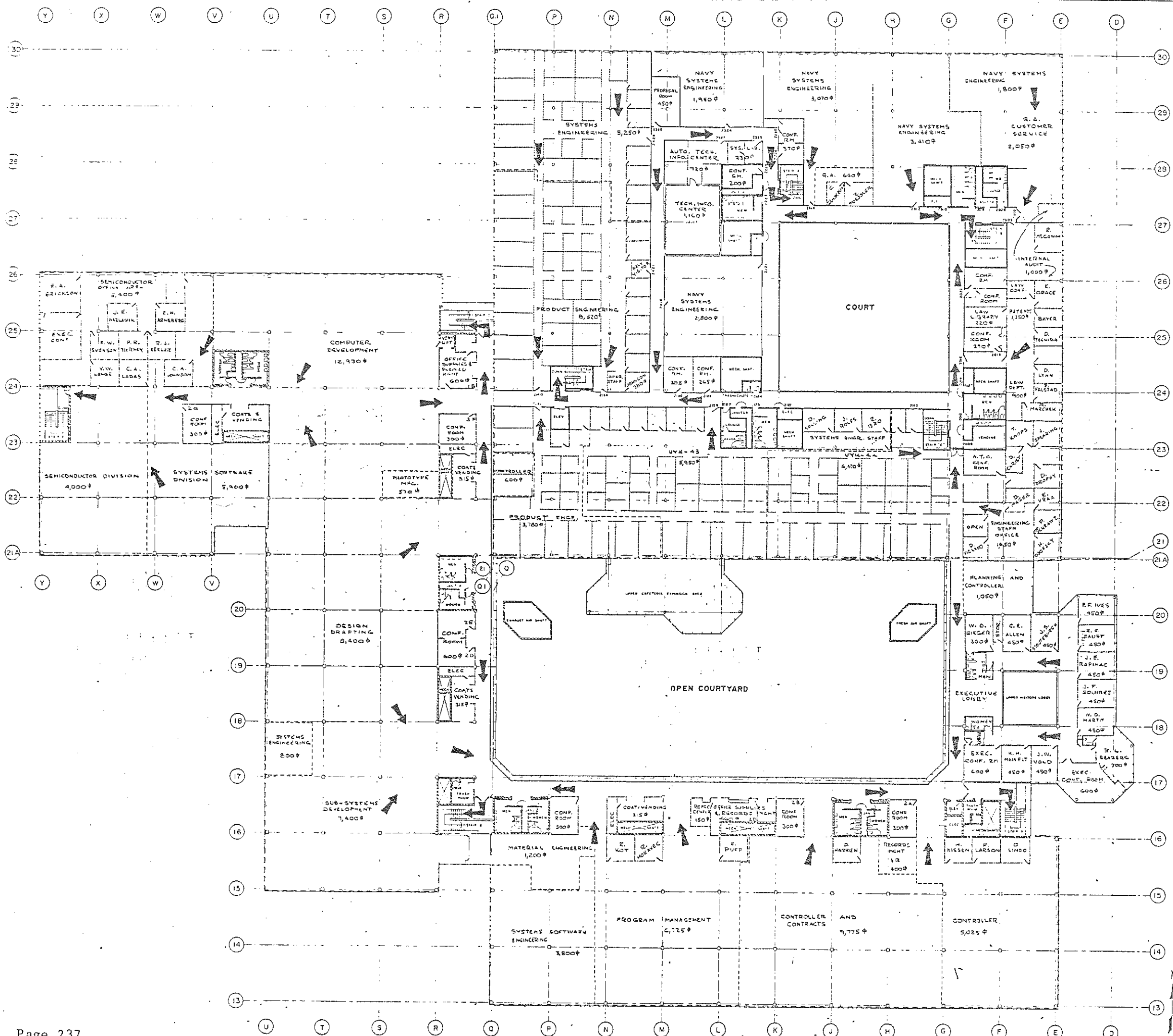
Wear self-contained breathing apparatus when fighting fire.



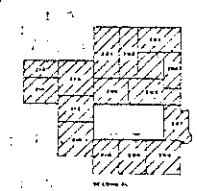








- WALL LEGEND**
- CEILING HANG TO FALSE CEILING
  - CEILING HANG TO DECK
  - 1" x 8" HANG
  - 2" x 8" HANG
  - SHELTER
  - HANG HANGWAY
  - CONCRETE BLOCK
  - POWER CONCRETE
  - SLAT TILE



|          |      |   |    |
|----------|------|---|----|
| CLASS    |      | UNIVAC DIVISION   |    |
| TITLE    |      | UNIVAC PARK<br>SECOND FLOOR<br>EMERGENCY EVACUATION ROUTE |    |
| LAYOUT   | DATE | 3-15-82   | BY |
| DRAWN    | BY   |   |    |
| CHECKED  | BY   |   |    |
| ENGR     | BY   |   |    |
| APPROVED | BY   |   |    |

APPENDIX G-2  
LETTER EAGAN FIRE DEPARTMENT

SPERRY CORPORATION  
COMPUTER SYSTEMS  
SPERRY PARK, P.O. BOX 43525  
ST. PAUL, MINNESOTA 55164-0525  
TELEPHONE (612) 456-2222

July 17, 1984

Chief Administrator  
Divine Redeemer Hospital  
724 19 Avenue North  
So. St. Paul, MN

Dear Sir:

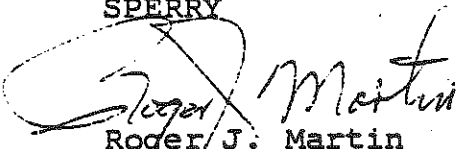
Enclosed is a copy of our revised Chemical and Hazardous Material Emergency Response procedure (Contingency Plan) to be used in the event of a chemical spill, chemical fire or other incidents involving hazardous materials.

This plan covers our facilities located at 2751 Shepard Road, 1902 Minnehaha Avenue in St. Paul, and 3333 Pilot Knob Road in Eagan.

If you have any questions or would like to review our chemical storage area give me a call at 456-4654 so we can arrange a convenient time.

Sincerely,

SPERRY



Roger J. Martin  
Manager  
Environmental Management

/lmk

SPERRY CORPORATION  
COMPUTER SYSTEMS  
SPERRY PARK, P.O. BOX 43525  
ST. PAUL, MINNESOTA 55164-0525  
TELEPHONE (612) 456-2222

July 17, 1984

Police Chief  
City of Eagan  
3800 Pilot Knob Rd.  
Eagan, MN 55121

Dear Sir:

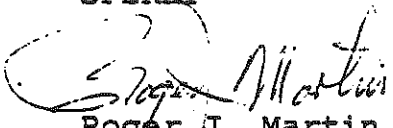
Enclosed is a copy of our revised Chemical and Hazardous Material Emergency Response procedure (Contingency Plan) to be used in the event of a chemical spill, chemical fire or other incidents involving hazardous materials.

This plan covers our facility located at 3333 Pilot Knob Road, Eagan, MN.

If you have any questions or would like to review our chemical storage area, give me a call at 456-4654 so we can arrange a convenient time.

Sincerely,

SPERRY



Roger J. Martin  
Manager  
Environmental Management

/lmk

SPERRY CORPORATION  
COMPUTER SYSTEMS  
SPERRY PARK, P.O. BOX 43525  
ST. PAUL, MINNESOTA 55164-0525  
TELEPHONE (612) 456-2222

July 17, 1984

Fire Chief  
City of Eagan  
Eagan Fire Department  
3800 Pilot Knob Road  
Eagan, MN 55121

Dear Sir:


Enclosed is a copy of our revised Chemical and Hazardous Material Emergency Response procedure (Contingency Plan) to be used in the event of a chemical spill, chemical fire or other incidents involving hazardous materials.

This revised plan supercedes the one we provided to your department in September, 1982. The previous plan should be discarded.

This plan covers our facilities located at 3333 Pilot Knob Road.

Sincerely,

SPERRY

  
Roger J. Martin  
Manager  
Environmental Management

/lmk

# SPERRY UNIVAC

APPENDIX G-3

UNIVAC PARK, P.O. BOX 3525  
ST. PAUL, MINNESOTA 55165  
TELEPHONE (612) 456-2222

September 8, 1982

Chief  
Eagan Fire Department  
City of Eagan  
3795 Pilot Knob Rd.  
Eagan, MN 55121

Dear Sir:

For your use, we are submitting a copy of the  
Emergency Response Procedure we use for the Univac  
DSD facilities in the Twin City area, for responding  
to chemical spills.

Information on our Univac Park facility is included  
in this procedure.

If you have any questions on the procedure or if  
you would want to tour our facility, please call  
me at 456-4654.

Sincerely,

SPERRY UNIVAC

  
Roger J. Martin  
Manager

Environmental Management

/lmk

**APPENDIX G-3**  
**MEDICAL EMERGENCY PROCEDURES**



## ORGANIZATION AND STAFFING

1. Dr. John A. Williams, Company Physician.  
Margie Ann Kirby, Medical Department Manager  
Report to the Personnel Department
2. The Physician's responsibilities are:
  - a. Performance and supervision of preplacement exam.
  - b. Evaluating and returning employees to work after medical absences.
  - c. Establishing standing medical directives.
  - d. Advice and consultation.
3. Physician Hours:
  - a. Plant 1 - Daily - 12:30 PM to 1:30 PM.
  - b. Plant 8 - Friday - 11:30 - 12 Noon.
4. Nurse Staff Hours are:
  - a. Shepard Road - Helen Sigmeth, R.N. - 7:00 AM to 3:30 PM  
Helen Cartford, R.N. - 7:00 AM to 3:30 PM  
Beverly Plum, R.N. - 3:30 PM to 12:00 Midnight
  - b. Midway - Mary Jane Hedlund, R.N. - 7:30 AM to 4:00 PM
  - c. Univac Park - Thelma Blakkestad, R.N. - 8:00 AM to 4:30 PM
  - d. Corporate Square - Phyllis Martin, R.N. - 7:00 AM to 3:30 PM.
5. Company Physician: Dr. John A. Williams  
Midway Family Physicians  
1690 University Park Medical Building  
Suite 370  
St. Paul, Minnesota 55104  
Telephone: 645-9477  
Private Office: 645-8624
  - a. His Associates are: Dr. Ken Lerdahl  
Dr. Robert Baker  
Dr. Ron Otremba
  - b. Consultant Physicians: See Listings

### MEDICAL DIRECTIVES

Medical Directives are written procedures, approved and signed by the physician who has been designated by management as the physician responsible for the medical direction of the employee health program. Medical Directives serve as the medical authorization for the registered professional nurse in giving emergency care to employees for occupational and non-occupational injuries and illnesses. These are developed jointly by the physician and nurse. Review, updating and reapproval are recommended at least yearly or when procedures change.

## MEDICAL DIRECTIVES AND NURSING PROCEDURES

### Emergency Situations

The Occupational Health Nurse must be able to act in any emergency situation. The nurse is expected to have professional competence and skill and use good judgement at all times.

#### General Principles Applicable in All Emergency Situations:

1. Act promptly
2. Think clearly
3. Do first things first
4. Practice within the scope of the State Nurse Practice where employed.

#### General Procedures Applicable in Emergency Situations:

1. Maintain open airway, breathing and circulation.
2. Control bleeding.
3. Call paramedic ambulance-service
  - a. Plant 1 & 2 - St. Paul Paramedics - 911
  - b. Plant 8 & Corporate Square - Divine Redeemer Ambulance - 455-9609
4. Call a physician.
5. Prevent and treat for shock (see shock).
6. Prevent infection and further injury.
7. Provide the physician with history and assessment findings.
8. Arrange for follow-up care and record all pertinent data.

#### Additional Medical Directives Applicable in All Emergency Situations:

1. Oxygen (flow to be determined by nurse) may be used prn.
2. Transport all emergencies to Hospital of Choice, St. Paul Ramsey Hospital or Divine Redeemer Hospital.
3. Cardiac Arrest emergencies are transported to St. Paul Ramsey or Divine Redeemer Hospital.
4. All work related emergencies are transported to Midway Hospital for Shepard Road and Midway Facility, Divine Redeemer Hospital for Eagan and Corporate Square Facility. (This includes chemical spills, etc.)

## MEDICAL DIRECTIVES AND NURSING PROCEDURES

### OTHER SITUATIONS

#### General Procedures Applicable in Other Situations:

1. Make a nursing assessment.
2. Record the history and nursing assessment findings.
3. Take vital signs on all persons, TPR and BP.
4. Chronic or recurring disorders should be referred to the employee's physician.
5. When referring an employee (at his request) to a physician or dentist, always present more than one name.  
(See Professional Referral Pages)
6. If an employee requests the nurse to give injections or medications which have been prescribed by his/her own physician, the nurse may do so, providing the employee's physician requests this in writing and submits the patient's diagnosis. This order then must be approved by the physician in charge of the Health Service. This does not include allergy shots.
7. The Medical Department shall provide necessary emergency care for non-occupational injuries and refer the employee to his/her personal physician for definitive treatment.
8. STANDING ORDER DRUG TREATMENT IS AS FOLLOWS:
  - a. Aspirin, Tylenol, Anacin and Bufferin may be used at the nurse's discretion.
  - b. ALWAYS check for allergies, past medical and health problems, or contraindications for use before giving any medication.
  - c. Do not give more than TWO doses of any medication during an eight hour shift.
  - d. Most minor problems should not be treated for more than TWO days. See specific condition in procedures.
  - e. An employee must be evaluated in the Medical Department before receiving any medications.
9. When physician consult is needed, call Company M.D., Dr. J. A. Williams, if employee has no private physician or private M.D. is not available.

RECOMMENDATIONS: Call employee's physician when symptoms are unusual, (fainting, acute, or when employee is pregnant) and more than mild transitory problem, i. e. URI, flu.



SPERRY CORPORATION  
COMPUTER SYSTEMS  
SPERRY PARK, P.O. BOX 43525  
ST. PAUL, MINNESOTA 55164-0525  
TELEPHONE (612) 696-4242

Rev. 10 Oct, 1983

To: Midway Hospital Emergency Rooms  
Divine Redeemer Hospital Emergency Rooms

Re: Hydrofluoric Acid Burns

All hydrofluoric acid burns greater than 65 square centimeters in diameter should be admitted to the hospital with continuous cardiac monitoring with particular reference to the QT interval. Blood gases and serum electrolytes should be drawn with special reference to calcium and magnesium. Intravenous Calcium Gluconate (1 gram) with N/S should be started with continuous IV drip on all cases with EKG changes. Contact Company Physician for continuing follow-up orders:

Dr. John A. Williams  
Midway Family Physicians  
1690 University Park Medical Building  
Suite 370  
St. Paul, Minnesota 55104  
Telephone: 645-9477 Night & Day

The following orders should have been completed at the plant before transportation to hospital:

1. Remove clothing if involved to prevent inhalation of fumes and vapors.
2. Continuous irrigation with water for 20 minutes.
3. Application of Magnesium Oxide to neutralize the toxic fluoride ion.
4. Numbers 2 and 3 must be completed before transportation to hospital. This step is critical.
5. Paramedics to continue EKG monitoring during transportation.
6. Determine concentration of acid, if possible.

Hydrofluoric Acid Burns - Page 2

All cases where the employee has been exposed to Hydrofluoric vapors in large concentrations and/or over a four hour period of time should be treated in the same manner at the Emergency Room. Oxygen at 7 liters per minute, should be administered at descretion of nurse in charge and should be continued during period of transportation to the hosptial.

These orders apply only to Sperry Computer System Employees.

Dr. John A. Williams  
Company Physician

JAW/dn

MEDICAL DIRECTIVES AND NURSING PROCEDURES FOR EMERGENCY  
CARE OF OCCUPATIONAL AND NON-OCCUPATIONAL  
INJURIES AND ILLNESSES

NAME AND ADDRESS OF COMPANY

SPERRY COMPUTER SYSTEMS, DSD  
UNIVAC PARK, P.O. BOX 64525  
ST. PAUL, MINNESOTA 55164-0525

NAME AND ADDRESS OF PHYSICIAN

DR. JOHN WILLIAMS  
1690 UNIVERSITY PARK MEDICAL BUILDING  
SUITE 370  
ST. PAUL, MINNESOTA 55104

TELEPHONE: 645-9477

NAME OF NURSE IN CHARGE

MARGIE KIRBY, MANAGER  
HEALTH AND MEDICAL SERVICES

NAMES OF STAFF NURSES

Thelma Blakkestad; Helen Cartford; Mary Jane Hedlund;  
Phyllis Martin; Beverly Plum and Helen Sigmeth

APPROVED:

1-3-83  
Date

John Williams M.D.  
Signature M.D.

REVIEWED AND UPDATED:

12-18-83  
Date

John Williams M.D.  
Signature M.D.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature M.D.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature M.D.

## SECTION H

### PERSONNEL TRAINING

The information contained in this section outlines the personnel training for Sperry, Computer Systems, Shepard Road hazardous waste storage facility in accordance with the requirements of 40 CFR 122.25(a)(12) and 264.16 and 270.14(a)(12). The Department Manager is responsible for reviewing all training requirements and insuring an annual review for all personnel in the Environmental Management Department that are responsible for handling hazardous waste in any manner.

#### H-1 JOB TITLES AND DUTIES

Figure H-1 (Page 250) shows the organization of Sperry's Environmental Management Group that handles our hazardous waste. There are six employees directly responsible for handling hazardous waste at the Sperry Park facility.

There are four additional people in our group that indirectly support the Sperry Park facility. There is also many other people within the company that support us including: hazardous waste coordinators for each chemical using department, security guards, move crew, facility maintenance, and truck drivers. All personnel receive training. Appendix H-1 (Page 251) describes the objectives, responsibilities, education and experience required for each of our job descriptions.



## H-2 TRAINING

Each employee within the Environmental Management Department receives formal training through Professional Organizations established to provide the type of training required by regulations. Additional training is provided as changes occur in the regulations and a general review is provided at least once a year. This training is provided by Department Manager and Supervisors. Training records are kept in the files of the Department Manager.

Technicians are required to read all of the procedures and receive on the job training. After several months of training they sign off on a training record Appendix H-3 (Page 283). Before an employee is allowed to sign off shipping papers, they receive formalized classroom instructions, see Appendix H-3.

(Page 283) for certificates. Appendix H-4 through H-8 (Pages 298-387) describes training sessions Environmental management personnel give to support groups: hazardous waste coordinators, move crew, guards and truck drivers. These sessions are updated and presented yearly. Included are the sign off sheets of personnel receiving training.

### H-3 EMERGENCY RESPONSE TRAINING

Appendix H-8 (Page 376) describes emergency response training Sperry has completed with sign off sheets of personnel participating.

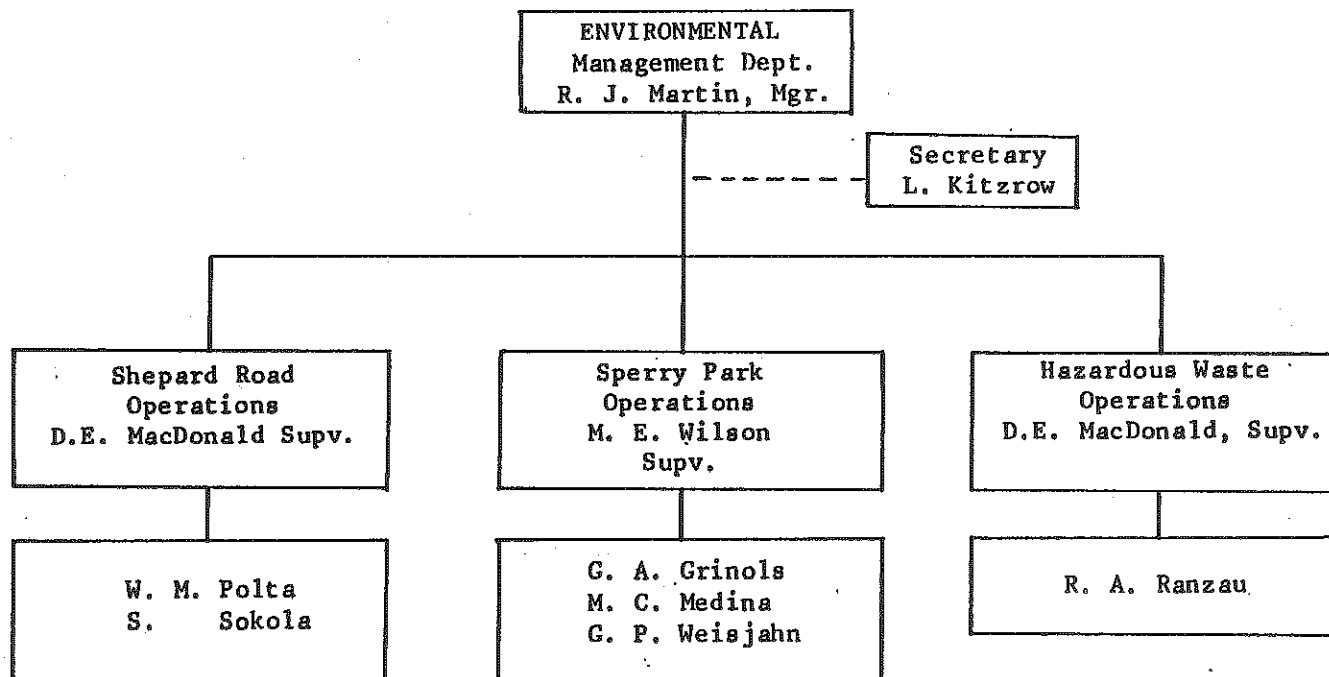


FIGURE H-1

JAN 1984

APPENDIX H-1

ENVIRONMENTAL MANAGEMENT POSITION DESCRIPTION

TITLE Environmental Management Technician B  
MAJOR ORG. Defense Systems Division DATE June 1979  
MAJOR ORG. COMPONENT Industrial Relations & Services  
LOCATION St. Paul P.D. NO. 205670  
REPORTS TO Environmental Management Supervisor EXEMPT ☐ NON-EXEMPT ☒

Accountability Objectives:

Assists in the operation of all equipment used by the Environmental Management Group for complying with environmental regulations.

Principle Responsibilities:

1. Assist in the operation and maintenance of all equipment used for waste treatment, including deionizing systems, fume scrubbers, sampling and test equipment.
2. Take corrective action when necessary to insure that the equipment and instrumentation operated by the Environmental Management Group is properly maintained.
3. Assist in the preparation of hazardous wastes for shipment according to established procedures.
4. Be familiar with the processes and operations of the departments which the Environmental Management Group provides services for. Initiate corrective actions when problems occur.
5. Assist in the housekeeping of the areas assigned.

Education and Experience:

Two years of college or technical school Environmental Technology, Chemistry, or equivalent education plus typically 0-1 year experience or equivalent education, training, and/or related work experience.

Name of Employees: Scot R. Sokola  
Greg P. Weisjahn

## TITLE ENVIRONMENTAL MANAGEMENT TECHNICIAN A

MAJOR ORG. Defense Systems Division

DATE June 1979

MAJOR ORG. COMPONENT As Assigned

LOCATION St. Paul

P.D. NO. 205669

REPORTS TO Environmental Management  
SupervisorEXEMPT ☐ NON-EXEMPT ☒Accountability Objectives:

Performs duties requiring practical knowledge and experience, assists in training subordinate technicians, and assists in the design, development, and problem analysis of the operational functions of the Environmental Management Department.

Principle Responsibilities:

1. May perform all duties of lower classified technicians, direct the work and maintain or assist in training them as required.
2. Operate all equipment used for waste treatment including deionizing systems, fume scrubbers, sampling and test equipment.
3. Provide routine maintenance of equipment to insure proper operation.
4. Assist with the design of systems to insure compliance with all environmental regulations.
5. Be knowledgeable of the hazardous material shipping regulations and be able to prepare hazardous materials for shipment according to established procedures.
6. Assist in clean up procedures in the event of a hazardous material spill.
7. Responsible for presenting data and information required in system designs for equipment or procedure changes and updates.
8. Assist in housekeeping of the assigned areas.

Education and Experience:

Two years of college or technical school Environmental Technology, Chemistry, or equivalent education plus typically 2-5 years related experience or equivalent education, training and/or related work experience.

Name of Employees: Gregory A. Grinols  
Michael C. Medina  
William M. Polta

|                      |  |                                 |  |
|----------------------|--|---------------------------------|--|
| TITLE                | Environmental Management Engineering Assistant |                                 |  |
| MAJOR ORG.           | Defense Systems Division                       | DATE                            | June 1979                                      |
| MAJOR ORG. COMPONENT | Industrial Relations and Services              |                                 |  |
| LOCATION             | St. Paul                                       | P.D. NO.                        | 205668   |
| REPORTS TO           | Environmental Management Supervisor            | EXEMPT <input type="checkbox"/> | NON-EXEMPT <input checked="" type="checkbox"/> |

Accountability Objectives:

Under minimal supervision, performs duties requiring practical knowledge and experience, trains subordinate technicians, and assists engineers in system design, development, documentation, procurement, and problem analysis of the operational functions of the Environmental Management Group.

Principle Responsibilities:

1. Responsible for the operation, maintenance, repair, test, and calibration of all equipment and instrumentation used for the operation of waste treatment systems, including deionizing systems, fume scrubbers, sampling and test equipment.
2. Trains and provides technical assistance and directs the work activity of assigned subordinate technicians.
3. Solves or finds solutions to problems relating to the operation of waste treatment systems and all other areas which could be a potential pollution problem.
4. Acquires and records data required to determine the need for new or revised systems or procedures, and generates the necessary drawings, lay outs, etc.
5. Analyzes and recommends methods of improving the efficiency of all the systems for which the Environmental Management Group is responsible.
6. Maintain close liaison with all departments that use the services of the Environmental Management Group and coordinate the activities relating to these operations.
7. Maintains records required as part of the regulations of the various government agencies relating the environmental control.
8. May perform duties of lower classifications as required.

Education and Experience:

Two years of college or technical school Environmental Technology, Chemistry, or equivalent education plus typically 5-7 years related experience or equivalent education, training and/or related work experience.

Name of Employees: Roger A. Ranzau

TITLE ENVIRONMENTAL MANAGEMENT SPECIALIST

MAJOR ORG. Defense Systems Division

DATE June 1979

MAJOR ORG. COMPONENT As Assigned

LOCATION St. Paul

P.D. NO. 205667

REPORTS TO Environmental Management  
SupervisorEXEMPT ☐ NON-EXEMPT ☒Accountability Objectives

Performs technical work of a complex nature related to system design and development, documentation, procurement and installation of the system whether it is related to equipment or a procedure.

Principle Responsibilities:

1. Participates in the design and development of processes and procedures to insure compliance with all environmental regulations that affect the operation of the facilities.
2. Analyzes and recommends methods of improving the performance of an operation.
3. Assists in the estimating of project costs, time schedules, personnel, and material requirements.
4. Prepares technical and progress reports on assignments.
5. Directs the work of technicians assigned and may train or assist training them as required.
6. Maintains liaison with other groups as required to complete assignments.
7. Must be knowledgeable about all pertinent environmental regulations.
8. Assist in clean up procedures in the event a hazardous material spill.
9. Assist with housekeeping in the assigned areas.

Education and Experience:

Two years of college or technical school Environmental Technology, Chemistry, or equivalent education plus typically 7 or more years related experience or equivalent education, training and/or related experience.



TITLE ENVIRONMENTAL MANAGEMENT ENGINEER, ASSOCIATE

MAJOR ORG. Defense Systems Division

DATE June 1979

MAJOR ORG. COMPONENT As Assigned

LOCATION St. Paul

P.D. NO.

REPORTS TO As Assigned

EXEMPT ☒ NON-EXEMPT ☐Accountability Objective:

Assists other professional personnel through performance of assignments or experiments of limited scope and difficulty in the analysis of processes and procedures and is responsible for the completion of assigned tasks in an efficient and technically competent manner.

Principle Responsibilities:

1. Performs technical work of minor professional difficulty in the field of Environmental Management, including process control. Makes use of standard apparatus, methods and techniques. Evaluates and tests for conformance to specifications, reproducibility and economy.
2. Assists in the analysis of materials or data which may require the application of modified or nonstandard procedures under the guidance of immediate supervisor.
3. Evaluates data and prepares technical reports, and maintains log book on the progress of assigned duties.
4. May direct the technical work of technicians and other assistants and may train or assist in their training.
5. Maintain liason with other personnel to aid in the completion of assigned duties.
6. Must be knowledgeable of all pertinent environmental regulations.
7. Keep the department manager aware of any operational or housekeeping deficiencies.

Education and Experience:

Degree in Environmental Technology, Chemistry or equivalent education, plus typically 0-2 years related experience or equivalent education, training and/or related work experience.

|                      |                                   |  |                                     |
|----------------------|-----------------------------------|--|-------------------------------------|
| TITLE                | Environmental Management Engineer |  |                                     |
| MAJOR ORG.           | Defense Systems Division          | DATE                                       | March 1980                          |
| MAJOR ORG. COMPONENT | As assigned                       |  |                                     |
| LOCATION             | St. Paul                          | P.D. NO.                                   |                                     |
| REPORTS TO           | As assigned                       | EXEMPT <input checked="" type="checkbox"/> | NON-EXEMPT <input type="checkbox"/> |

ACCOUNTABILITY OBJECTIVE

Performs research and/or development assignments of normal scope and difficulty in the development of new or improved processes. Some evaluation, originality, or ingenuity is required.

ACCOUNTABILITIES

1. Performs technical work in the field of environmental engineering using both standard and nonstandard methods, techniques, and procedures to conduct investigations or applied research. Evaluates and tests for conformance to specifications, reproducibility and economy.
2. Analyzes problems and conducts investigations on environmental control process problems. Recommends methods of improving efficiency of operations. Assists in the planning of new projects by giving appraisals through the supervisor of developments or techniques in which the incumbent is particularly experienced.
3. Assists in the preparation of cost estimates, time schedules, personnel, facilities, and material requirements.
4. Prepares technical reports on assigned programs. May edit the reports of professionals assigned. Maintains engineering log book.
5. May exercise technical work direction over one or more assigned.
6. Works in close liaison with other organizations to exchange needed information concerning problems with process control systems which directly affect environmental control.
7. Should be familiar with government regulations and their application in the field of environmental engineering.

EDUCATION AND EXPERIENCE

Applicable degree or equivalent plus typically 2-5 years related experience, or equivalent education, training and/or related work experience.

Name of Employee: Mark E. Wilson

TITLE Senior Environmental Management Engineer

MAJOR ORG. Defense Systems Division

DATE April 1983

MAJOR ORG. COMPONENT Facilities Resources

LOCATION St. Paul

P.D. NO. 202122

REPORTS TO Manager of Environmental  
Management DepartmentEXEMPT ☒ NON-EXEMPT ☐Accountability Objective

Plans and performs research and development assignments in the experimentation, design and/or analysis of new or improved materials or processes. Assignments are broad in nature, requiring appreciable originality and ingenuity. Supervise individuals activities of those assigned to the incumbent.

Accountabilities

1. Analyzes and formulates original techniques. Implements procedures and methods to ensure compliance with environmental regulations.
2. Plans, organizes, coordinates, and supervises the activities of those subordinates assigned.
3. Prepares or assists in the preparation of cost estimates, time schedules, personnel and material requirements for the installation of equipment needed for meeting environmental regulations or for cost saving techniques.
4. Prepares required technical and progress reports and maintains own log book and sees that log books and check lists of assigned personnel are properly maintained.
5. Familiarizes and trains employees in the technical objectives including local, state and federal regulation requirements.
6. Maintains a close liaison with other departments, consulting and advising with respect to environmental management concerns.
7. Be knowledgeable of government regulations that affect the operations of Sperry.
8. Insures that the area of operation under the supervision of the incumbent is in compliance with all applicable government regulations and company policies relating to environmental management.

Education and Experience

B. S. Degree in Environmental Technology, Chemistry or equivalent, plus five years related experience.

Name of Employee: Dan E. MacDonald

|                      |                                   |  |
|----------------------|-----------------------------------|--|
| TITLE                | ENVIRONMENTAL MANAGER             |  |
| MAJOR ORG.           | DEFENSE SYSTEMS DIVISION          | DATE FEBRUARY 1983   |
| MAJOR ORG. COMPONENT | RESOURCES MANAGEMENT              |  |
|                      | FACILITIES MANAGEMENT             |  |
| LOCATION             | ST. PAUL                          | P.D. NO.   |
| REPORTS TO           | DIRECTOR, FACILITIES<br>RESOURCES | EXEMPT <input checked="" type="checkbox"/> NON-EXEMPT <input type="checkbox"/> |

ACCOUNTABILITY OBJECTIVE:

This position is responsible for the management of the Environmental Management Department. As such, this responsibility encompasses the operational, functional, and regulatory management of all chemical and utility processes used in the development and manufacture of products and facility use for the Defense Systems Division and tenants such as the Semiconductor Division.

DIMENSIONS:FINANCIAL:

The annual operating budget for the environmental section is approximately \$1,125,000. Our manufacturing, engineering, and Semiconductor operation is dependent on this group for the treatment and disposal of all chemical waste which is instrumental in enabling the manufacture of over \$300,000,000 of product each year and for the operation of equipment to produce high purity water required for the production of Semiconductors.

ORGANIZATIONAL:

2 exempt personnel (Chemical Engineers)  
6 non-exempt personnel (Engineering Techs)

NATURE AND SCOPE OF JOB:

The Defense Systems Division in St. Paul operates in five separate facilities plus additional rental space in other buildings as required for its operation, as well as facilities in Clearwater, Florida and Winnipeg, Canada. As such, this position is responsible for the management and control of all procedural and operational elements affecting the environment. This includes hazardous waste disposal, waste conditioning, air emissions, etc.

Provide information to other divisions of Sperry Corporation on a consulting basis on environmental related matters.

TITLE Environmental Manager

P.D. NO.

PRINCIPLE RESPONSIBILITIES:

1. Manages the preparation of and/or performs technical tasks of unusual difficulty or complexity on all matters pertaining to the effect of our processes on the environment. This aspect required frequent involvement with customers, local, state and federal regulatory offices.
2. Investigates, plans and designs equipment, principles and systems for accomplishing environmental treatments in accordance with established regulations and laws.
3. Must be available to give expert professional appraisal of new methods which would entail environmental aspects and the affect of same if incorporated into a product line.
4. Manages the development of solutions to specific technical problems involved in No. 3 above and designs a course of action to accomplish same.
5. Approves and/or prepares complex technical reports to provide environmental information required by law to all levels of government and in specific cases to potential customers where it is an item of the contract.
6. Prepares for approval and controls departmental capital and operating expense budget.
7. Provides consulting to Plant Engineering and other operating departments on all design criteria involving environmental impact elements for renovations and new construction.
8. Acts in an advisory capacity to division management in planning and coordinating all programs or processes impacting the environment.
9. In conjunction with the Energy Management Department, manage the ongoing Employee Energy/Environmental Awareness Program to aggressively promote environmental conservation in all DSD facilities.
10. Maintain familiarity with all levels of government regulations, implement and supervise with subordinates, the carrying out of same to insure our compliance to avoid work stoppage, punitive and criminal redress for compliance failure.
11. The incumbent is accountable for the implementation of governmental and company policies dealing with EEO and AAP compliance in organizations under the incumbent's span of control. Incumbent is further accountable to see that subordinate supervision is also made aware of Company Policies regarding EEO and AAP and that they conform to the requirements and intent of these Policies and Programs.

PRINCIPLE RESPONSIBILITIES: (Continued)

12. Work with industry associations to ensure that accurate information is available to lawmakers prior to the promulgation of regulations affecting our operations.
13. Participate on the Sperry Corporate Environmental Committee to provide corporate directions to the various operations within the corporation that are affected by government environmental regulations.

EDUCATION AND EXPERIENCE:

B.S. Degree in Chemical Engineering, or equivalent, plus seven or more years in related experience or equivalent education, training related work experience.

APPROVAL:

R. J. Martin, IncumbentE. T. Michaud

APPENDIX H-2

HAZARDOUS WASTE/MATERIALS MANAGEMENT  
INSTRUCTOR TRAINING

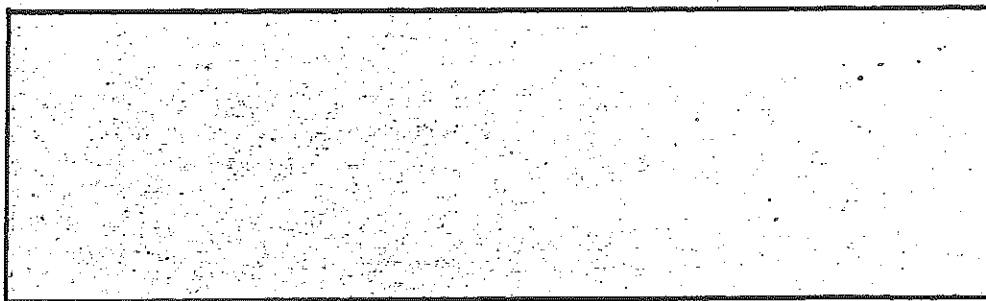
## LEADER GUIDE

### INTRODUCTION

1. OUTLINE COMPANY OBJECTIVES REGARDING SEMINAR
2. EXPLAIN THE FOLLOWING COMPLIANCE PROBLEMS
  - A. PENALTIES FOR NON-COMPLIANCE
  - B. INDIVIDUAL LIABILITY FOR PENALTIES AND PUNITIVE DAMAGES
  - C. TRAINING REQUIREMENTS OF EPA AND DOT

(REVIEW REGULATIONS STRUCTURE USING THE FOLLOWING GRAPH)

CFR-49 - DOT HAZARDOUS MATERIALS UNIVERSE



(USING RECTANGLE, EXPLAIN THE HAZARDOUS MATERIALS UNIVERSE UNDER DOT )

(NOTES:



## CFR 49 - DOT HAZARDOUS MATERIALS UNIVERSE

EPA  
CLEAN WATER  
"REPORTABLE  
QUANTITY"  
5000  
1000  
100  
10  
1

300  
HAZ  
SUB

1. EPA AMENDS CLEAN WATER ACT TO REGULATE 300 HAZARDOUS MATERIALS AS "HAZARDOUS SUBSTANCES" BECAUSE IS ACCIDENTIALLY RELEASED POSE A THREAT TO HUMAN HEALTH AND THE ENVIRONMENT.
2. CREATES NEW TERM - "REPORTABLE QUANTITY"
3. WHEN A RELEASE OF A "HAZARDOUS SUBSTANCE" EQUALS OR EXCEEDS THE "RQ" - IMMEDIATE NOTIFICATION TO EPA OR NATIONAL RESPONSE CENTER.
4. REPORTING RELEASE SETS INTO MOTION ESCULATING PENALTIES
5. DOT ADOPTS SAME "RQ" RESPONSIBILITIES IN 49CFR.
6. DOT ADOPTS DIFFERENT REPORTING RESPONSIBILITIES THAN THOSE OF EPA. (WILL BE COVERED IN DEPTH LATER.)

(NOTES:

3.

CFR49 - DOT HAZARDOUS MATERIALS UNIVERSE

EPA  
CLEAN  
WATER  
"REPORTABLE  
QUANTITY"  
5000  
1000  
100  
10  
1

|                   |                             |                                     |                                      |  |
|-------------------|-----------------------------|-------------------------------------|--------------------------------------|--|
| 300<br>HAZ<br>SUB | BATF<br>150<br>EXPL<br>MATS | OSHA<br>CANCER<br>CAUSING<br>AGENTS | NRC<br>RADIO-<br>ACTIVE<br>MATERIALS |  |
|-------------------|-----------------------------|-------------------------------------|--------------------------------------|--|

1. EXPLAIN THE BUREAU OF ALCOHOL, TOBACCO AND FIREARMS REGULATIONS REGARDING REPORTING LOSSES OR THEFTS.
2. EXPLAIN OSHA REQUIREMENTS TO LABEL HAZARDOUS MATERIALS THAT ARE KNOWN OR SUSPECTED "CARCINOGENS"
3. EXPLAIN THAT RADIOACTIVE MATERIALS ARE REGULATED BY BOTH THE DEPARTMENT OF TRANSPORTATION AND THE NUCLEAR REGULATORY AGENCY.
4. POINT OUT ADDITONAL REGULATIONS FOR MULTIPLE IDENTIFICATION FOR ALL HAZARDOUS MATERIALS WILL BE COMING IN THE NEXT YEAR.

(NOTES:

4.

CFR49 - DOT HAZARDOUS MATERIALS UNIVERSE

| EPA<br>CLEAN WATER<br>"REPORTABLE<br>QUANTITY"<br>5000<br>1000<br>100<br>10<br>1 | 300<br>HAZ<br>SUB | BATF<br>150<br>EXPL<br>MATS | OSHA<br>CANCER<br>CAUSING<br>AGENTS | NRC<br>RADIO<br>ACTIVE<br>MATERIALS | EPA<br>HAZARDOUS<br>WASTE<br>RCRA |   |
|--|-------------------|-----------------------------|-------------------------------------|-------------------------------------|-----------------------------------|---|
|  | ←                 |                             |                                     |                                     |                                   | → |

REVIEW OF THE EPA (RCRA) HAZARDOUS WASTE REGULATIONS:

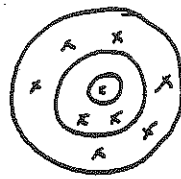
1. FOUR CLASSES OF HAZARDOUS WASTE - IGNITABLE-REACTIVE-CORROSIVE-TOXIC
2. NOT ALL HAZARDOUS MATERIALS ARE WASTE....HOWEVER?
3. THE GENERATOR MUST DETERMINE IS ANY WASTE DISPOSED OF CAN CAUSE A HEALTH HAZARD...AND EVEN THOUGH IT MAY NOT MEET THE CRITERIA OF A WASTE - IT MUST BE REGULATED.
4. BASED ON THE MONTHLY ACCUMULATION OR GENERATION..A GENERATOR MAY HAVE TO COMPLY WITH ALL THE REGULATIONS OR NONE.

(NOTES:

5.

CFR49 - DOT HAZARDOUS MATERIALS UNIVERSE

EPA  
CLEAN  
WATER  
"REPORTABLE  
QUANTITY"  
5000  
1000  
100  
10  
1

| 300<br>HAZ<br>SUB | BATF<br>150<br>EXPL<br>MAT | OSHA<br>CANCER<br>CAUSING<br>AGENTS | NRG<br>RADIO-<br>ACTIVE<br>MATS | EPA<br>HAZARDOUS<br>WASTE<br>(RCRA) |   |
|-------------------|----------------------------|-------------------------------------|---------------------------------|-------------------------------------|---|
|                   |                            |                                     |                                 |                                     |  |
|                   |                            |                                     |                                 |                                     |   |

EPA CERCLA AC

1. EXCISE TAX
2. H.W.S.N.
3. "RQ" =  
1 lb.

1. OUTLINE THE REQUIREMENTS OF THE SUPERFUND ACT
2. REVIEW THE THREE REQUIREMENTS OF THE ACT.

A. EXCISE TAX

B. HAZARDOUS WASTE SITE NOTIFICATION

1. 55 GALS OF WASTE STORED OR DISPOSED OF ON SITE
2. SITES SELECTED FOR DISPOSAL PRIOR TO RCRA
3. MAJOR SPILLS ON SITE OR IN TRANSPORTATION
4. PCB STORAGE (OPTIONAL)

3. REVIEW THE CONCEPT OF THE SITE NOTIFICATION

4. REVIEW DOT'S NON-ADOPTION OF SUPERFUND "REPORTABLE QUANTITY"

(NOTES:

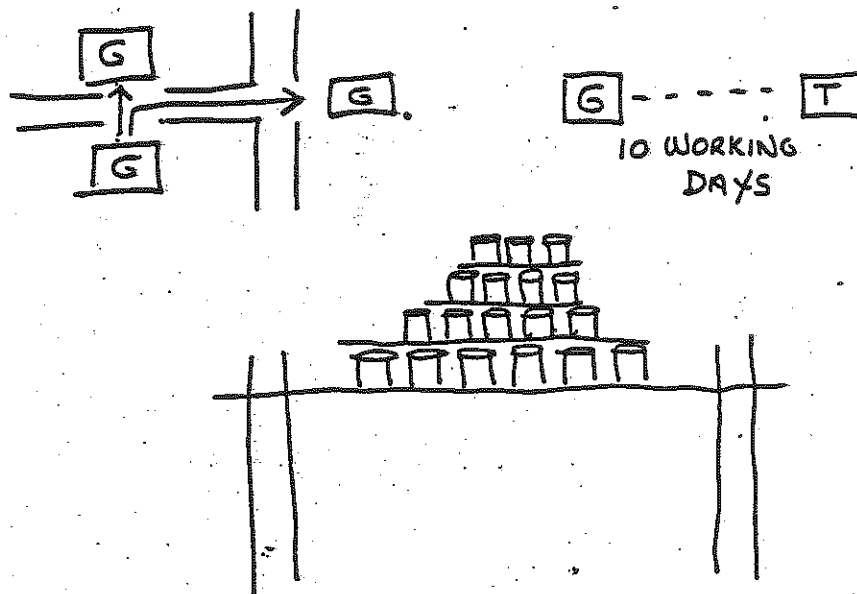
6.

INSTRUCTOR'S NOTE: AFTER THIS REVIEW...PROGRAM THE AUDIO/VISUAL  
PROGRAM - INTRODUCTION TO HAZARDOUS MATERIALS,  
SUBSTANCES & WASTES".

QUESTION & ANSWER SESSION FOLLOWING PROGRAM

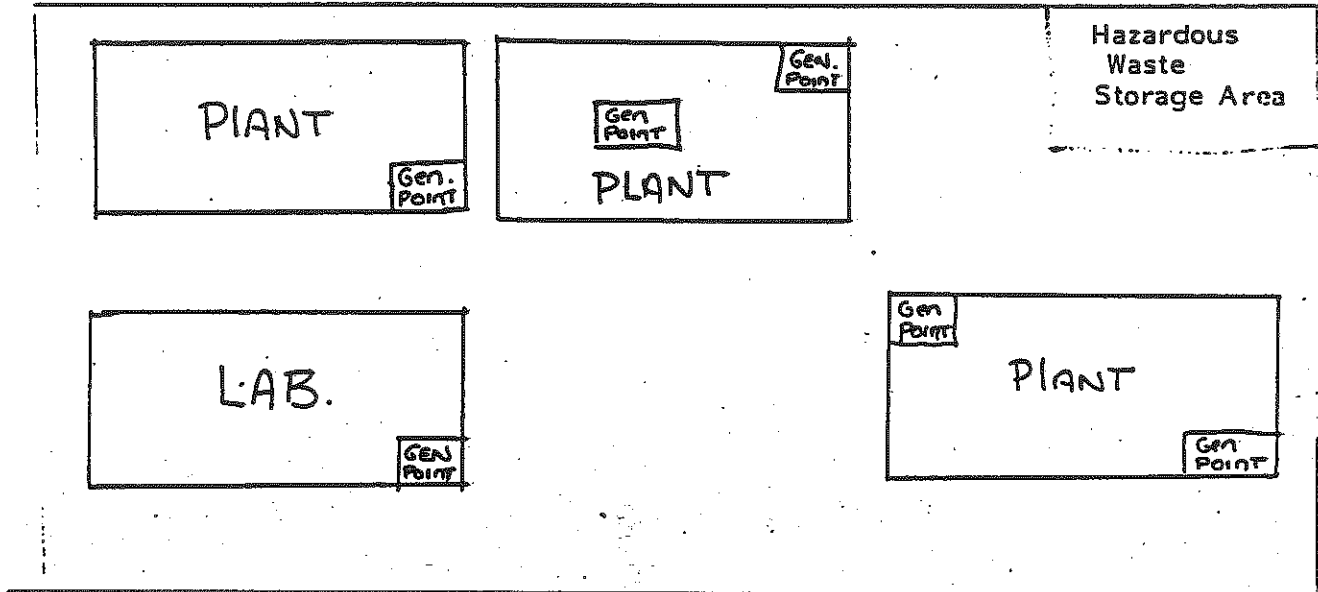
POSSIBLE AREAS OF REVIEW

1. ANNUAL REPORT TO ANNUAL SURVEY
2. GENERATOR'S STATUS AS A CONTIGUOUS FACILITY
3. 10 WORKING DAYS FOR STORAGE PRIOR TO STORAGE PERMIT
4. POSSIBLE GENERATOR'S MONITORING REQUIREMENTS



(NOTES:

COVER & EXPLAIN THE EPA PROPOSED REGULATIONS FOR GENERATORS  
RCRA CONTINGENCY PLANS & STORAGE REQUIREMENTS OUTLINED IN THE  
JANUARY 3RD, 1983 FEDERAL REGISTER:



**EXPLAIN:** WHEN A GENERATOR WILL GENERATE OR ACCUMULATE HAZARDOUS WASTE AT SPECIFIC SITES WITHIN A FACILITY OR PLANT AREA THE GENERATOR MAY ACCUMULATE UP TO 55 GALLONS AT EACH SITE. HOWEVER, WHEN THE 55 GALLON ACCUMULATION HAS BEEN REACHED, THE GENERATOR MUST MOVE THAT WASTE, WITHIN 72 HOURS, TO THAT LOCATION IN HIS PLANT THAT HAS BEEN DESIGNATED AS THE "HAZARDOUS WASTE STORAGE AREA". IF THE GENERATOR EXCEEDS 72 HOURS AT A SITE WITHIN HIS PLANT THAT IS NOT INCLUDED IN HIS RCRA CONTINGENCY PLAN, THEN THAT SITE WOULD NO BE SUBJECT TO ALL THE REGULATIONS OUTLINED IN SECTION 262.34 - ACCUMULATION TIME.

## SESSION # 2


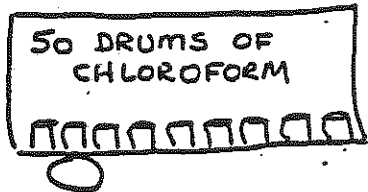
Review April 15th, 1981 FEDERAL REGISTER on Hazardous Waste Site Notification Program.

Review use of Hazardous Material Telephone Assistance Directory

Review use of Hazardous Materials & Waste Training Booklets, as applicable.

1982/83 HAZARDOUS MATERIALS SUBSTANCES & WASTE COMPLIANCE GUIDE

1. Review Emergency Response Telephone Numbers on Page iii.
2. Review list of BATF regulated Explosive Materials on Page 2/4
3. Review EPA Hazardous Substances listed in II7.3 on page 226/228
4. Review EPA Hazardous Substance Reporting Responsibility in II7.21 on Page 230.
5. Review DOT Hazardous Substance Reporting Responsibility in I71.17 on page 18.

| E P A  | D O T   |
|--|---|
| <p>"REPORTABLE QUANTITY"<br/>released in any<br/>24 hour period into<br/>Navigable Waters</p> <p>20,000 lbs Chloroform</p>  | <p>"REPORTABLE QUANTITY"<br/>released from one (1)<br/>container, tank car or<br/>cargo tank</p> <p>50 DRUMS OF<br/>CHLOROFORM</p>  |

BASED ON DOT REGULATIONS TRUCK LOADED WITH 50 DRUMS OF CHLOROFORM WOULD NOT BE REGULATED; THEREFORE IF ALL DRUM WERE RELEASED OR DISCHARGED IN ACCIDENT, NO NOTIFICATION TO THE NATIONAL RESPONSE CENTER REQUIRED BY DOT. BUT UNDER II7.17, EPA WOULD REQUIRE NOTIFICATION BECAUSE THE DISCHARGE EXCEEDED 5000 POUNDS IN ONE TWENTY FOUR HOUR PERIOD.

STRESS THE NEED TO CHECK BOTH DOT AND EPS REGULATIONS WHEN DISCHARGE OF A HAZARDOUS MATERIAL OR WASTE ALSO MEETS THE DEFINITION OF A DISCHARGE OF HAZARDOUS SUBSTANCE.

REVIEW THE CHARACTERISTICS OF HAZARDOUS WASTE IN PART 2 6 1 ,  
SECTIONS 2 6 1 . 3 1 - SUBPART C.....AND THE GENERIC LISTINGS OF  
HAZARDOUS WASTES IN SUBPART D.

EXPLAIN THE DIFFERENCES BETWEEN THE DOT AND EPA DEFINITIONS  
OF HAZARDOUS MATERIALS AND HAZARDOUS WASTE:

| E P A                                       | D O T   |
|---|---|
| FOUR (4) HAZARD CLASSES                     | TWENTY ONE (21) HAZARD CLASSIFICATIONS                                |
| IGNITABLE<br>REACTIVE<br>CORROSIVE<br>TOXIC | O R M - E<br><br>HAZARDOUS WASTE, LIQUID/<br>SOLID N.O.S. - O R M - E |

1. COVER THE REQUIREMENTS TO PROVIDE THE DOT INFORMATION ON  
SHIPPING DOCUMENTATION AND THE EPA CLASSIFICATIONS ON THE  
UNIFORM HAZARDOUS WASTE MANIFEST.

2. REVIEW THE COIRCUMSTANCES WHERE A GENERATOR WILL USE THE  
PROPER DOT/EPA SHIPPING NAME IN THE HAZARDOUS MATERIALS  
TABLE IN 172.101 49CFR ——"HAZARDOUS WASTE, LIQUID/SOLID,  
N.O.S. - O R M - E.

A. WHEN A HAZARDOUS WASTE DOES NOT MEET THE CRITERIA  
OF A DOT HAZARDOUS MATERIALS BUT DOES MEET THE  
CRITERIA OF A EP TOXIC HAZARDOUS WASTE.

B. WHEN A WASTE DOES NOT MEET THE CRITERIA OF A HAZARDOUS  
MATERIAL UNDER DOT NOR A HAZARDOUS WASTE UNDER EPA  
BUT THE GENERATOR WANTS TO TREAT IS AS A HAZARDOUS  
WASTE.

CRITICAL POINT: NEVER USE THE NAME "HAZARDOUS WASTE, LIQUID/SOLID  
N.O.S. - O R M - E, IF THE WASTE MEETS THE CRITERIA  
OF A DOT HAZARD CLASSIFICATION. A GENERATOR MUST  
USE A PROPER SHIPPING NAME THAT FULLY IDENTIFIES  
THE HAZARDOUS WASTE.

REVIEW AUDIO/VISUAL PROGRAM \_ "CLASSES OF HAZARDOUS MATERIALS &  
AND WASTES" - QUAESTIONS & ANSWERS - SUMMARY AS NECESSARY



## SESSION # 3

HAVE PARTICIPANTS TAKE "EMPTIES & LEAKERS" PRE-TEST

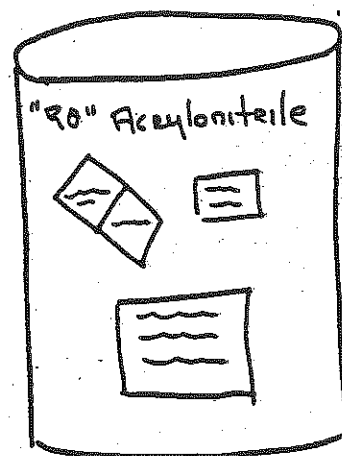
REVIEW EPA AND DOT REGULATIONS FOR "EMPTIES" AND "NON-EMPTIES".

REVIEW CHANGES IN DOT "EMPTIES" REGULATIONS:

1. PREVIOUSLY COULD REMOVE DOT LABEL EVEN THOUGH CONTAINER HAS RESIDUE.
2. NOW, ALL EMPTIES WITH RESIDUE MUST BE TREATED SAME WAY AS WHEN FILLED:

- a. SHIPPING PAPERS FOR COMMON CARRIERS ALWAYS.
- b. SHIPPING PAPERS FOR PRIVATE & CONTRACT CARRIERS WHEN:
  1. GLASS CARBOYS
  2. STILL CONTAINS "RQ"
  3. RAIL CAR WITH RESIDUE

BB

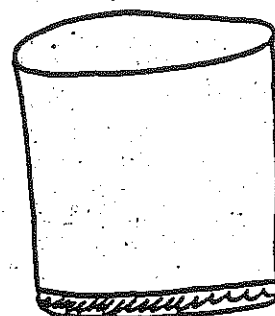


REVIEW EPA "EMPTIES" & "NON-EMPTIES" AS THEY APPLY TO REGULATED AND SMALL QUANTITY GENERATORS" (Ref: 261.7 - 261.33(c) - 261.5)

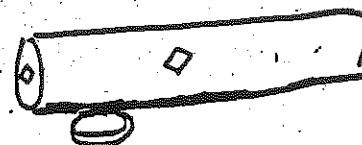
REGULATED GENERATOR:

1. ANY AMOUNT OF HAZARDOUS WASTE LISTED IN 261.33(e)
2. ANY CONTAINER WITH 2.5 CENTIMETERS OR ONE INCH RESIDUE LISTED IN 261.33(f) OR MEETING THE CRITERIA OF AN IGNITABLE, REACTIVE, CORROSIVE OR TOXIC WASTE.
3. ANY CONTAINER, UNDER 110 GALLONS WITH A RESIDUE OF 3% OR GREATER OF THE ORIGINAL CONTENTS OF IGNITABLE, REACTIVE CORROSIVE OR TOXIC OR LISTED ON 261.33(f)
4. ANY CONTAINER, OVER 110 GALLONS, WITH A RESIDUE OF 0.3% OR GREATER OF THE ORIGINAL CONTENTS OF THE CONTAINER OF IGNITABLE, REACTIVE, CORROSIVE OR TOXIC WASTE OR A WASTE LISTED IN 261.33(f).

BB



2.5 CM / 1"  
3% RESIDUE



0.3% RESIDUE

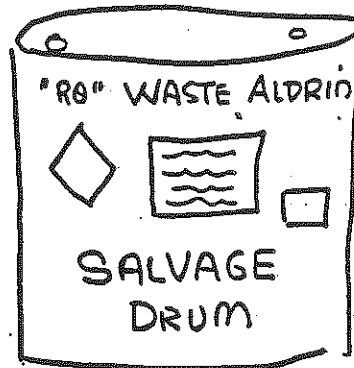
REVIEW DOT AMENDMENTS & REGULATIONS FOR OVER-PACKS AND LAB-PACKS

1. "RECOVERY DRUM" NO LONGER  
ACCETABLE.

BB

2. "SALVAGE DRUM" MUST BE MARKED  
ON EACH OVER-PACK OF LEAKER.

3. ALL DOT LABELS, MARKING &  
CONSIGNEE'S NAME & ADDRESS  
MUST BE PLACED ON OVER-PACK.



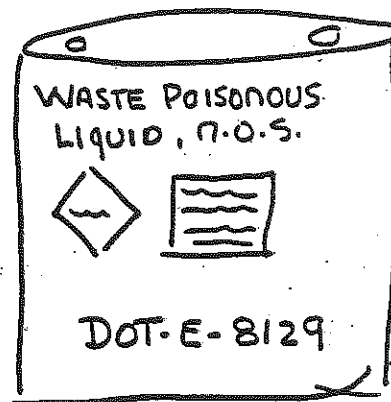
7AY EXPLAIN DOT/EPA REGULATIONS FOR  
LAB-PACKS: (Ref; 265.316 40 CFR &  
EXEMPTION DOT-E-8129)

BB

1. LAB-PACKS ONLY ALLOWED IN  
DOT SPEC. PACKAGINGS:

37A-STC 5 GALLON PAIL  
6J-STC 30 GALLON DRUM  
17H-STC 55 GALLON DRUM

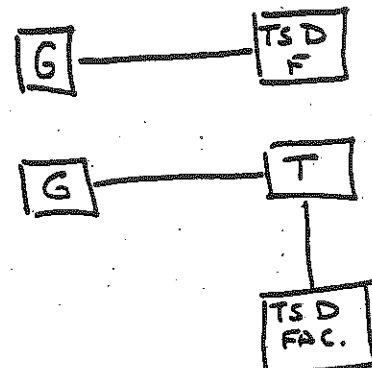
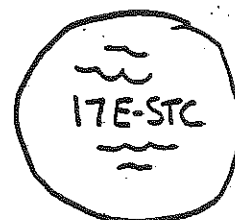
2. IN ADDITION TO ALL DOT/EPA  
LABELS & MARKINGS - MARK  
EACH OVER-PACK WITH DOT-E-8129



EXPLAIN REQUIREMENT FOR REUSE OF STC/NRC CONTAINER FOR WASTE

1. MUST BE SPECIFICATION CONTAINER  
REQUIRED BY REGULATIONS.
2. USE IN HIGHWAY MODE ONLY.
3. ALLOW TO STAND FOR 24 HOURS AFTER  
CLOSING & SEALING.
4. EXAMINE FOR LEAKS OR DAMAGE BEFORE  
LOADING ON TRANSPORTATION UNIT.
5. LOADING CARRIED OUT BY GENERATOR
6. UNLOADING CARRIED OUT BY TSD FACILITY.
7. IF CONTAINER OFF-LOADED BEFORE REACHING  
FINAL DESTINATION, NEW OR RECONDITIONED  
CONTAINERS MUST BE USED FOR WASTE.

BB



EXPLAIN DOT & SUPERFUND (CERCLA) REGULATIONS & RULINGS FOR LEAKING CONTAINERS AT COMPANY'S DOCK OR PLANT AREA"

1. VEHICLE WITH LEAKER "OUT-OF-SERVICE UNTIL LEAKER OFF-LOADED, REPAIRED, REPLACED OR OVER PACKED IN "SALVAGE DRUM".
2. DRIVER MAY MOVE TO NEAREST SAFE LOCATION TO CARRY THIS OUT, OR IT CAN BE OFF-LOADED AND HANDLED AT COMPANY'S DOCK
3. IF DRIVER LEAVES COMPANY FACILITY OR PLANT, COMPANY AND PERSONS KNOWLEDGABLE OF LEAKER ALSO SUBJECT TO DOT PENALTIES.
4. IF HAZARDOUS MATERIAL REGULATED UNDER "SUPERFUND" COMPANY OR PERSON KNOWLEDGABLE OF DISCHARGE ALSO SUBJECT TO PENALTIES UNDER CERCLA (SUPERFUND) IF DISCHARGE NOT REPORTED TO NATIONAL RESPONSE CENTER.
5. ESTABLISH COMPANY'S POLICY ON THE HANDLING OF LEAKERS ON CARRIERS VEHICLES COMING INTO COMPANY YARD OR AT DOCK.

REVIEW AUDIO/VISUAL PROGRAM - HANDLING EMPTIES & LEAKERS

HAVE SEMINAR PARTICIPANTS TAKE POST-TEST & REVIEW ANSWERS

QUESTIONS & ANSWERS - SUMMARY IF NECESSARY.

REVIEW THE DOT HAZARDOUS MATERIALS TABLE - 1 7 2 . 1 0 1 :  
FIRST COLUMN #1

+ = MUST CLASS HAZARDOUS MATERIALS OR WASTE AS SHOWN IN COLUMN #3 - EVEN THOUGH IT DOES NOT MEET THAT HAZARD CLASS DEFINITION.

A= AS HAZARDOUS MATERIAL, ONLY REGULATED IN AIR MODE - AS A HAZARDOUS WASTE, REGULATED IN ALL MODES OF TRANSPORTATION

W= AS A HAZARDOUS MATERIALS, ONLY REGULATED IN WATER MODE, AS A HAZARDOUS WASTE, REGULATED IN ALL MODES OF TRANSPORTATION

AW= AS A HAZARDOUS MATERIAL, ONLY REGULATED IN AIR & WATER MODES, A HAZARDOUS WASTE REGULATED IN ALL MODES OF TRANSPORTATION.

E= WHEN THE HAZARD CLASS IS ORM-E, ONLY REGULATED (IN ALL MODES) WHEN A "RQ" AMOUNT IN ONE (1) CONTAINER. WHEN A HAZARDOUS WASTE ANY AMOUNT IN ONE CONTAINER IS REGULATED. WHEN "RQ" IN ONE (1) CONTAINER, INCLUDE "RQ" BEFORE OR AFTER NAME IN BASIC DESCRIPTION, AND "RQ" MARKINGS ON ALL CONTAINERS UNDER 110 GALLONS.

E= WHEN "E" SHOWN FOR ANY OTHER HAZARD CLASS, EXCEPT ORM-E, HAZARDOUS MATERIAL OR WASTE REGULATED IN ALL MODES OF TRANSPORTATION. WHEN "RQ" AMOUNT IN ONE CONTAINER, ENTER "RQ" IN BASIC DESCRIPTION AND MARK "RQ" ON ALL CONTAINERS UNDER 110 GALLONS.

EA= ONLY REGULATED IN AIR MODE UNTIL "RQ" AMOUNT IN ONE CONTAINER, WHEN "RQ" IN ONE CONTAINER, REGULATE IN ALL MODES OF TRANSPORTATION. A HAZARDOUS WASTE HOWEVER WOULD BE REGULATED IN ALL MODES OF TRANSPORTATION. WHEN A WASTE, DISREGARD "A"

EW= ONLY REGULATED IN WATER MODE UNTIL "RQ" AMOUNT IN ONE (1) CONTAINER. WHEN "RQ" OR MORE IN ONE CONTAINER, REGULATE IN ALL MODES OF TRANSPORTATION. DISREGARD "W" IF A HAZARDOUS WASTE WHICH WOULD BE REGULATED IN ALL MODES OF TRANSPORTATION.

EAW= ONLY REGULATED IN AIR AND WATER UNTIL "RQ" AMOUNT IN ONE CONTAINER. WHEN "RQ" OR MORE IN ONE CONTAINER, REGULATE IN ALL MODES OF TRANSPORTATION. DISREGARD "AW" IF A HAZARDOUS WASTE AND REGULATE IN ALL MODES OF TRANSPORTATION.

COLUMN#2 - REVIEW USE OF DOT PROPER SHIPPING NAMES AS HAZARDOUS MATERIAL OR WASTE.

COLUMN#3 - - HAZARD CLASSIFICATIONS

COLUMN#3A- DOT IDENTIFICATION NUMBERS

COLUMN#4 - DOT LABELS

COLUMN#5 - A/B - EXCEPTION & PACKAGING REQUIREMENTS

COLUMN#6 - A/B - QUANTITY LIMITATIONS IN THE AIR MODE

COLUMN#7 - PLACARDING REQUIREMENTS & NUMERICAL DESIGNATIONS

COLUMN#8 - CHEMICAL ABSTRACT SERVICE NUMBERS

COLUMN#9 - EMERGENCY RESPONSE GUIDE NUMBERS

NEW DOT/EPA REQUIREMENTS FOR MULTIPLE IDENTIFICATION OF HAZARDOUS MATERIALS & WASTE (USE "FLAMMABLE LIQUID, POISONOUS N.O.S. ON PAGE #69)

20 DRUM WASTE - EQUAL PARTS OF PHENOL, CHLOROBENZE & MEK

"RQ" WASTE FLAMMABLE LIQUID, POISONOUS (OR POISON B), N.O.S.

(PHENOL-CHLOROBENZENE) FLAMMABLE LIQUID UN1992 - 20 DRUMS

WHEN A HAZARDOUS MATERIAL OR WASTE THAT IS A MIXTURE OR SOLUTION OF DIFFERENT HAZARDOUS MATERIALS OR WASTE THAT MEET THE CRITERIA OF A FLAMMABLE LIQUID, FLAMMABLE SOLID, OXIDIZER OR CORROSIVE WHICH ALSO MEETS THE DEFINITION OF A "POISON B" MUST BE IDENTIFIED UNDER BOTH HAZARD CLASSES.

IF A HAZARDOUS MATERIAL OR WASTE IS DESCRIBED UNDER AN N.O.S. OR NOT OTHERWISE SPECIFIED SHIPPING NAME in the 172.101 TABLE, AND THE CHEMICAL OR TECHNICAL NAME OF THE MATERIAL IS NOT IN THE BASIC DESCRIPTION FOR A POISON B OR A HAZARDOUS SUBSTANCE...THEN THE NAMES MUST BE ADDED TO THE BASIC DESCRIPTION.

IF THE BASIC DESCRIPTION HAS MORE THAN ONE HAZARD CLASS IN IT, ENTER THE PRIME HAZARD CLASS AFTER THE BASIC DESCRIPTION FOR PLACARDING PURPOSES.

"RQ" WASTE FLAMMABLE LIQUID, POISONOUS N.O.S. (ACRYLONITRILE - CHLOROBENZENE) FLAMMABLE LIQUID UN1992

SELECT SPECIFIC HAZARDOUS MATERIAL OR WASTE SHIPMENTS FOR COMPANY'S PLANTS OR FACILITIES REPRESENT BY SEMINAR PARTICIPANTS.

## REVIEW OF COLUMN 3A:

1. I.D. NUMBER NOW REQUIRED ON ALL SHIPPING PAPERS AND MANIFESTS AND PORTABLE TANKS, TANK CARS AND CARGO TANKS. THE I.D. NUMBER WILL BE REQUIRED ON ALL CONTAINERS OR PACKAGING UNDER 110 GALLONS ON JULY 1ST, 1983.
2. I.D. NUMBER ARE NEVER DISPLAYED ON PLACARDS FOR RADIOACTIVE MATERIALS POISON A OR EXPLOSIVE A. IF BEING SHIPPED IN PORTABLE TANKS, CARGO TANKS OR TANK CARS...THE I.D. PANEL WILL BE AFFIXED NEXT TO THE PLACARDS.
3. I.D. NUMBERS ARE NEVER REQUIRED ON A TRUCK OR TRAILER IN THE HIGHWAY MODE AND IN FACT WOULD BE IN VIOLATION IF MORE THAN ONE HAZARDOUS MATERIAL OR WASTE WERE ON THE VEHICLE.
4. I.D. PANELS ARE USED WHEN A TRANSPORTER OR CARRIER WILL USE A UNIT THAT IS PERMANENTLY PLACARDED WITH THE "GENERIC HAZARD CLASS" PLACARDS BECAUSE THE CARRIER IS IN "DEDICATED OR EXCLUSIVE USE" SERVICE. IN THESE INSTANCES...THE SHIPPER OR GENERATOR MUST NOT ONLY PROVIDE THE I.D. PLACARDS...BUT MUST ALSO AFFIX THEM TO THE UNIT.

USING SAMPLES, EXPLAIN THE METHODS OF PLACARDING UNITS WITH GENERIC PLACARDS AND PANELS.

"RQ" FLAMMABLE LIQUID, POISONOUS N.O.S.

ACRYLONITRILE UN1093

ALDRIN UN2761

FLAMMABLE LIQUID UN1992

EXPLAIN THAT I/D/ NUMBERS ARE NEVER USED FOR "CONSTITUENTS" CHEMICAL TECHNICAL NAMES WHICH ARE REQUIRED AS PART OF THE BASIC DESCRIPTION. THE I.D. NUMBER IS SHOWN AFTER THE BASIC DESCRIPTION BUT MUST ONLY SHOW ONE I.D. NUMBER WHICH WOULD BE SHOWN IN COLUMN 3A, AFTER THE PROPER DOT SHIPPING NAME IN COLUMN 2.

EXPLAIN WHY THE I.D. NUMBER IS CRITICAL...BECAUSE OF IT'S USE BY EMERGENCY RESPONSE TEAMS AND FIRE FIGHTERS. (USE DOT EMERGENCY RESPONSE GUIDE TO SHOW IMPORTANCE)

## SESSION 5 - LABELS, MARKINGS AND PLACARDING HAZARDOUS MATERIALS & WASTE

(HAVE PARTICIPANT TAKE PRE-TEST ON LABELS, MARKINGS AND PLACARDING )

### REVIEW COLUMN 4

1. COLUMN 4 OUTLINES LABELS REQUIRED FOR ALL CONTAINERS UNDER 110 GALLONS OR CONTAINERS OVER 64 CUBIC FEET BUT NOT MORE THAN 640 CUBIC FEET.
2. IN SOME CASES MORE THAN ONE LABEL IS REQUIRED EVEN THOUGH IT IS NOT SHOWN IN COLUMN 4.

(REVIEW: CFR 49 - SECTION 173.400 - LABELING REQUIREMENTS  
PAGE #152 - POCKET COMPLIANCE GUIDE)

3. DEPENDING UPON THE HAZARDOUS MATERIAL OR WASTE....ADDITIONAL MARKING REQUIREMENTS MAY EXIST FOR PACKAGING.

(REVIEW CFR49 - SECTION 172.300 - MARKING REQUIREMENTS  
PAGE #145 - POCKET COMPLIANCE GUIDE)

(REVIEW AUDIO/VISUAL PROGRAM - LABELS, MARKINGS AND PLACARDING HAZARDOUS MATERIALS, SUBSTANCES AND WASTE)

(INSTRUCTOR'S NOTE: REVIEW SCRIPT FOR AUDIO/VISUAL. BECAUSE OF IT'S LENGTH AND COMPLEXITY...INSTRUCTOR MAY STOP PROGRAM AT SPECIFIC SECTIONS AND REVIEW EACH SECTION IN CFR 49 REPRINT. THIS IS THE INSTRUCTOR'S OPTION)

(AT END OF THE AUDIO/VISUAL - HAVE PARTICIPANT TAKE POST-TEST AND SEE RESULTS BEFORE AND AFTER SESSION)

QUESTION AND ANSWER SESSION

(NOTES:

SESSION 6 - SHIPPING PAPERS AND MANIFESTS FOR HAZARDOUS MATERIALS,  
SUBSTANCES AND WASTE:

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(HAVE PARTICIPANTS TAKE PRE-TEST ON SHIPPING PAPERS AND MANIFESTS)

REVIEW THE DIFFERENCES BETWEEN A HAZARDOUS MATERIAL SHIPPING PAPER AND A HAZARDOUS WASTE MANIFEST. (THIS WILL VARY DEPENDING UPON STATE REQUIREMENTS AND STATE MANIFESTS) (REVIEW SECTION 172.200 IN POCKET COMPLIANCE GUIDE ON PAGE 139.)

EXPLAIN DOT REQUIREMENTS FOR EXACT INFORMATION IN SPECIFIC SEQUENCE ON HAZARDOUS MATERIAL OR SUBSTANCE SHIPPING PAPER.

EXPLAIN DOT/EPA REQUIREMENTS FOR COMPLETE INFORMATION ON HAZARDOUS WASTE MANIFEST WHICH WOULD INCLUDE ALL TRUE SIGNATURES.

EXPLAIN REQUIREMENTS OF "SUPERFUND" ONE POUND "REPORTABLE QUANTITY" NOTIFICATION TO THE NATIONAL RESPONSE CENTER AND THE ONLY WAY IT MAY BE INDICATED ON A HAZARDOUS MATERIALS SHIPPING PAPER OR A HAZARDOUS WASTE MANIFEST. (CORPORATE POLICY WILL DICTATE WHETHER THE COMPANY WILL USE THE "RQ" ONE POUND WARNING ON SHIPPING PAPERS OR MANIFESTS)

REVIEW AUDIO/VISUAL PROGRAM ON "SHIPPING PAPER AND MANIFESTS FOR HAZARDOUS MATERIALS, SUBSTANCES AND WASTE".

(HAVE PARTICIPANT TAKE POST-TEST AND REVIEW RESULTS)

QUESTIONS AND ANSWERS SESSION

(NOTES:



## SESSION 7 - HAZARDOUS MATERIALS, SUBSTANCES & WASTE & THE DRIVER.

THIS SESSION WILL COVER THE DRIVER'S RESPONSIBILITIES FOR:

1. FEDERAL MOTOR CARRIER SAFETY REGULATIONS OUTLINED IN CFR 49 - PARTS 390-397.
2. "CARRIAGE BY PUBLIC HIGHWAY" IN SECTION 177 IN CFR49.

DRIVER'S RESPONSIBILITIES: (TRY TO DRAW OUT FROM GROUP)

1. ACCEPTING ONLY PROPERLY DOCUMENTED AND PACKAGED, MARKED AND LABELED HAZARDOUS MATERIALS, SUBSTANCES AND WASTE.
2. PROPER PLACARDING ON VEHICLES
3. PROPER LOADING AND STOWING OF HAZARDOUS MATERIALS AND WASTE ON ALL VEHICLES OR UNITS.
4. COMPLIANCE WITH THE DOT FEDERAL MOTOR CARRIER SAFETY REGULATIONS WHEN TRANSPORTING HAZARDOUS MATERIALS OR WASTE.
5. EMERGENCY ACTION AND RESPONSES WHEN DEALING WITH ACCIDENTS, INCIDENTS OR EMERGENCIES INVOLVING HAZARDOUS MATERIALS, SUBSTANCES OR WASTE.
6. DRIVER LOG RESPONSIBILITIES
7. ANY OTHERS THE DRIVERS MENTION

(HAVE PARTICIPANTS TAKE THE PRE-TEST FOR DRIVERS)

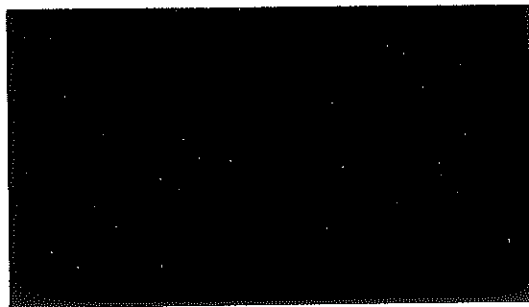
REVIEW AUDIO/VISUAL PROGRAM ON "HAZARDOUS MATERIALS & WASTE & THE DRIVER)

(HAVE PARTICIPANTS TAKE POST-TEST AND COMPARE RESULTS - DISCUSS RESULTS)

QUESTIONS AND ANSWER SESSION

Hazardous Wastes / Materials Management Instructor Certification

THE TRANSPORTATION SKILLS PROGRAM

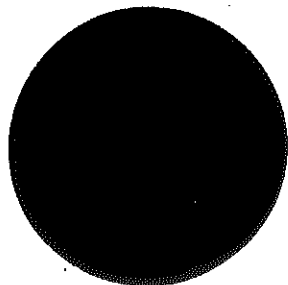


This Certifies That roger j. martin

Has Enrolled in and Completed The

**Hazardous Wastes / Materials Management Compliance Seminar**

and this Certificate represents a sincere effort on their company's behalf and on their own behalf to comply with the U. S. Department of Transportation Hazardous Materials Regulations, and the Environmental Protection Agency Hazardous Waste Regulations.

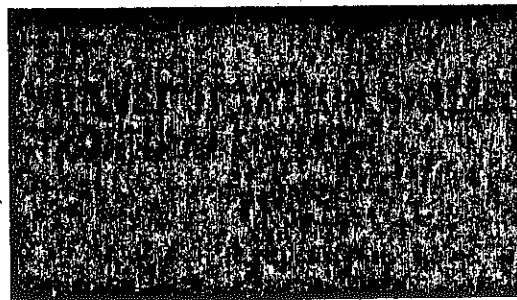


R. J. Keegan  
Robert J. Keegan, President

Dan Cooper  
Dr. Daniel Cooper, V. P.  
& Training Director

**Hazardous Wastes / Materials Management Instructor Certification**

**THE TRANSPORTATION SKILLS PROGRAM**

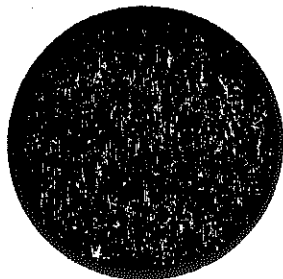


*This Certifies That* **dan e. macdonald**

**Has Enrolled in and Completed The**

**Hazardous Wastes / Materials Management Compliance Seminar**

and this Certificate represents a sincere effort on their company's behalf and on their own behalf to comply with the U. S. Department of Transportation Hazardous Materials Regulations, and the Environmental Protection Agency Hazardous Waste Regulations.



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**R. J. Keegan**  
Robert J. Keegan, President

**Dan Cooper**  
Dr. Daniel Cooper, V. P.  
& Training Director

APPENDIX H-3  
TRAINING CERTIFICATES

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print)

ROGER J. MARTIN

Signature

Roger J. Martin

Date

4/13/84

Life Number

19705

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print)

ROGER J MARTIN

Signature

Roger J Martin

Date

4/13/84

Life Number

19705

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) Dan MacDonald

• Signature Dan P. MacDonald

Date 4/12/84

Life Number 55686

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print) Dan MacDonald

Signature Dan P. MacDonald

Date 4/12/84

Life Number 55686



HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) MARK WILSON

Signature Mark E. Wilson

Date 4/12/84

Life Number 55968

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print) MARK WILSON

Signature Mark E. Wilson

Date 4/12/84

Life Number 55968

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) Greg Grivols  
Signature Greg Grivols  
Date 4/12/84  
Life Number 58728

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print) Greg Grivols  
Signature Greg Grivols  
Date 4/12/84  
Life Number 58728

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) William M. Poltg  
Signature William M. Poltg  
Date 4-13-84  
Life Number 062487

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print) William M. Peltz

Signature William M. Peltz

Date 4-13-81

Life Number 062487

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) ROGER BANIZAU  
Signature Roger Banizau  
Date 4/12/84  
Life Number 62737

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print)

ROGER RANZAU

Signature

Roger Ranzau

Date

4/12/84

Life Number

62737



HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) Michael C. Medina

Signature Mike Medina

Date ~~4-13-84~~ 4-13-84

Life Number 64127

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print)

Michael C. Medina

Signature

Mich Medina

Date

4-13-84

Life Number

64127

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job and understand that processes and procedures (ECP's) as they relate to my position in the Environmental Management Department of Sperry, Defense Systems Division, St. Paul.

Name (Print) Scot R Sokola  
Signature Scot R Sokola  
Date 8/17/84  
Life Number 65779

HAZARDOUS MATERIAL HANDLING

TRAINING CERTIFICATION

I certify that I have been trained on the job  
and understand that processes and procedures  
(ECP's) as they relate to my position in the  
Environmental Management Department of Sperry,  
Defense Systems Division, St. Paul.

Name (Print) Greg Weisohn  
Signature *Greg Weisohn*  
Date 4/13/81  
Life Number 90010

HAZARDOUS MATERIAL HANDLING  
TRAINING CERTIFICATION

I certify that I have received training on the requirements of the Department of Transportation and U.S. Environmental Protection Agency that pertain to hazardous material handling.

Name (Print)

Greg Weisbach

Signature

Greg Weisbach

Date

6-28-84

Life Number

90010

# HMI

The Hazardous Materials Institute  
Kansas City, Missouri

Certifies that

Roger A. Rangan

has participated in  
The Institute's 1983-84 Seminar Series on

## HANDLING HAZARDOUS MATERIALS AND WASTES

Completion of this intensive training program on the safe, legal preparation, shipment and transportation of hazardous materials and wastes is indicative of a sincere effort to increase knowledge of and achieve compliance with the federal hazardous materials and wastes regulations.

Edward C. Blum

EDWARD C. BLUM, INSTITUTE DIRECTOR

## ATTENDANCE ROSTER

Date: 5/7/84

Purpose: Hazardous Material Training

Instructors: R. J. Martin

M. E. Wilson

D. E. MacDonald

[illegible]

# J. T. Baker Chemical Co.

awards this certificate to



®

*Roger J. Martin*

for participation in

## The Management and Disposal of Hazardous and Chemical Wastes

*Paul Kleas*

President, J.T. Baker

*H. H. Norton*

Director, Safety Training

JUN 22 1984

Certified

*Robert J. Quincy Jr.*

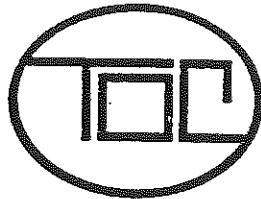
Instructor

*Larry A. Parker*

Instructor







**THE OPERATIONS COUNCIL  
of American Trucking Associations, Inc.**

**Certifies that**

ROGER J. MARTIN

has participated in  
The Operations Council's 1982-83 Seminar Series on

**HANDLING HAZARDOUS  
MATERIALS AND WASTES**

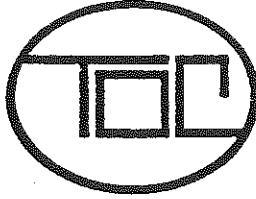
Completion of this intensive training program on the safe, legal preparation, shipment and transportation of hazardous materials and wastes is indicative of a sincere effort to increase knowledge of and achieve compliance with the federal hazardous materials and wastes regulations.

A handwritten signature in cursive script, reading 'Paul T. Domer'.

PAUL T. DOMER, EXECUTIVE DIRECTOR—TOC

A handwritten signature in cursive script, reading 'Ed Blum'.

EDWARD C. BLUM, TRAINING DIRECTOR



**THE OPERATIONS COUNCIL  
of American Trucking Associations, Inc.**

**Certifies that**

MICHAEL MEDINA

has participated in  
The Operations Council's 1982-83 Seminar Series on

**HANDLING HAZARDOUS  
MATERIALS AND WASTES**

Completion of this intensive training program on the safe, legal preparation, shipment and transportation of hazardous materials and wastes is indicative of a sincere effort to increase knowledge of and achieve compliance with the federal hazardous materials and wastes regulations.

A handwritten signature in cursive script, reading 'Paul T. Domer'.

PAUL T. DOMER, EXECUTIVE DIRECTOR—TOC

A handwritten signature in cursive script, reading 'Ed Blum'.

EDWARD C. BLUM, TRAINING DIRECTOR

# J. T. Baker Chemical Co.

awards this certificate to



Dan MacDonald

for participation in

## The Management and Disposal of Hazardous and Chemical Wastes

Paul Kleas

President, J.T. Baker

H. H. Norton

Director, Safety Training

JUL 17 1981

Certified

Robert T. Givens

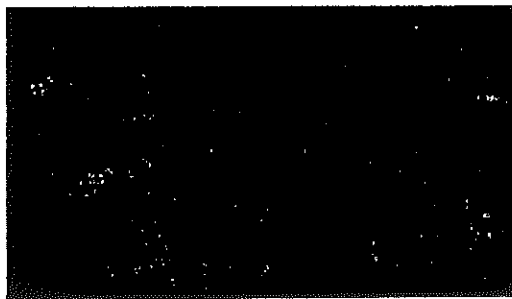
Instructor

Larry A. Parker

Instructor



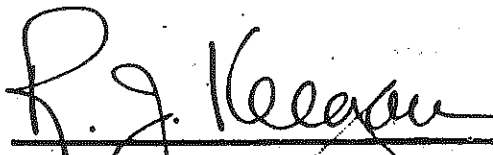
# THE TRANSPORTATION SKILLS PROGRAM



This Certifies That GREGORY A. GRINOLS

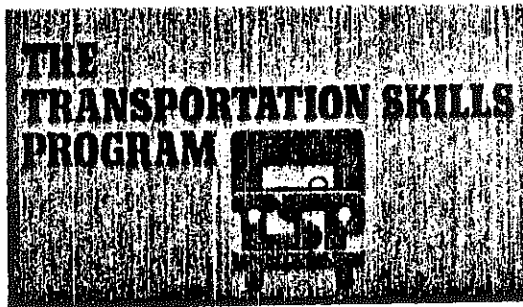
Has Enrolled in and Completed The  
**Hazardous Wastes / Materials Management Compliance Seminar**

and this Certificate represents a sincere effort on their company's behalf and on their own behalf to comply with the U. S. Department of Transportation Hazardous Materials Regulations, and the Environmental Protection Agency Hazardous Waste Regulations.

  
Robert J. Keegan, President

  
Dr. Daniel Cooper, V. P.  
& Training Director

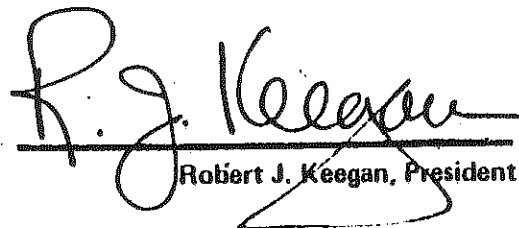
# THE TRANSPORTATION SKILLS PROGRAM

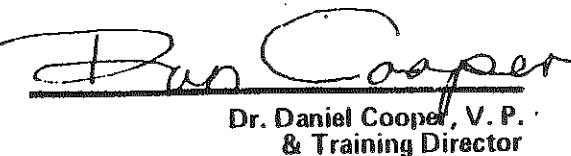


This Certifies That WILLIAM M. POLTA

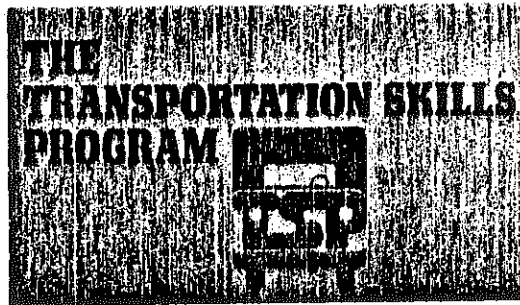
Has Enrolled in and Completed The  
**Hazardous Wastes / Materials Management Compliance Seminar**

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Robert J. Keegan, President

  
Dr. Daniel Cooper, V. P.  
& Training Director

# THE TRANSPORTATION SKILLS PROGRAM

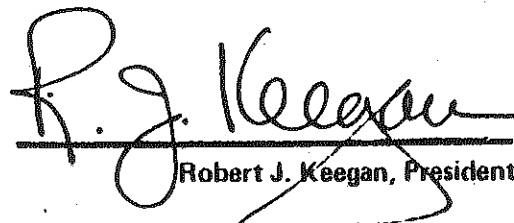


This Certifies That ROGER ARTHUR RANZAU

Has Enrolled in and Completed The

**Hazardous Wastes / Materials Management Compliance Seminar**

and this Certificate represents a sincere effort on their company's behalf and on their own behalf to comply with the U. S. Department of Transportation Hazardous Materials Regulations, and the Environmental Protection Agency Hazardous Waste Regulations.

  
Robert J. Keegan, President

  
Dr. Daniel Cooper, V. P.  
& Training Director

# HMI

**The Hazardous Materials Institute  
Kansas City, Missouri**

Certifies that

Mark Wilson

has participated in  
The Institute's 1983-84 Seminar Series on

## **HANDLING HAZARDOUS MATERIALS AND WASTES**

Completion of this intensive training program on the safe, legal preparation, shipment and transportation of hazardous materials and wastes is indicative of a sincere effort to increase knowledge of and achieve compliance with the federal hazardous materials and wastes regulations.

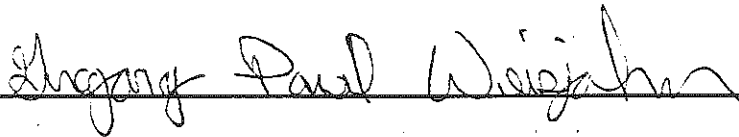
Edward C. Blum

EDWARD C. BLUM, INSTITUTE DIRECTOR

# HMI

**The Hazardous Materials Institute  
Kansas City, Missouri**

Certifies that



has participated in  
The Institute's 1983-84 Seminar Series on

## **HANDLING HAZARDOUS MATERIALS AND WASTES**

Completion of this intensive training program on the safe, legal preparation, shipment and transportation of hazardous materials and wastes is indicative of a sincere effort to increase knowledge of and achieve compliance with the federal hazardous materials and wastes regulations.



EDWARD C. BLUM, INSTITUTE DIRECTOR



# ATTENTANCE ROSTER .

Date: 2/22/83

Purpose: HAZARDOUS WASTE COORDINATOR TRAINING

Instructors: Roger Martin

Dan MacDonald

| Name                 | Clock Number | Department        |
|----------------------|--------------|-------------------|
| X ✓ Mike DeKoeke     | 19070        | FAB               |
| ✓ Elizabeth Heseke   | 52889        | Fab               |
| ✓ GRET KALKA         | 61608        | M.F.              |
| ✓ Dave West          | 19640        | Failure Analysis  |
| ✓ UDOM SIRIYONARAKDI | 864001       | "                 |
| X ✓ Farouk SSS       | 50065        | Insp- Engn.       |
| ✓ DuBrel             | 27886        | T-R-              |
| ✓ LEWIS BARK         | 39015        | P.C-FAB           |
| ✓ Kevin Jennings     | 55681        | MOS-S/D           |
| ✓ Bill Pelt          | 62487        | Environmental     |
| ✓ Norm Ryan          | 1297         | Maint.            |
| ✓ Ken Chedden        | 24431        | Store             |
| ✓ Ron Bonnet         | 63278        | Occ. Health Prog. |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |
|                      |              |                   |

# ATTENTANCE ROSTER

Date: 2/22/83

Purpose: HAZARDOUS WASTE COORDINATOR TRAINING

Instructors: Roger Martin

Dan MacDonald

| Name  | Clock Number | Department           |
|---|--------------|----------------------|
| ✓ <del>Night Virginia</del>                         | 428          | F.A.                 |
| ✓ <del>E. J. [unclear]</del>                        | 55563        | Rec. Insp.           |
| ✓ R. W. [unclear]                                   | 39948        | P.C. Fab             |
| ✓ <del>Don Lamb</del>                               | 25692        | T-B                  |
| ✓ ERN [unclear]                                     | 16635        | Rec Insp             |
| ✓ D. FERN   | 13530        | T-Bild               |
| ✓ <del>Jama Whitman</del>                           | 19116        | FAC. MAINT.          |
| ✓ <del>Darlene Johnson</del>                        | 21233        | P.C. Assy            |
| ✓ <del>Dennise E. Putair</del> <sup>Richards</sup>  | 25721        | P.C. FAB             |
| ✓ <del>Helen [unclear]</del> <sup>4594 X 6596</sup> | 13208        | P.C. Yale            |
| ✓ <del>Don Longell</del>                            | 19661        | M Fab                |
| ✓ Bruce Bahls                                       | 12905        | REFURB               |
| ✓ Tom Burger  | 51490        | Factory support      |
| ✓ Wayne Patrick                                     | 20599        | PC ASSY              |
| ✓ RON MARTIN  | 9876         | P.C. ASSY / SUB ASSY |
| ✓ John Butner                                       | 59276        | MAINT                |
| ✓ Jim Reiche  | 55776        | 1350                 |
| ✓ MD Newell   | 19740        | 1350                 |
| ✓ Roger Ramon                                       | 62737        | 1232                 |
| ✓ Mike Melina                                       | 64127        | 1232                 |

# ATTENTANCE ROSTER

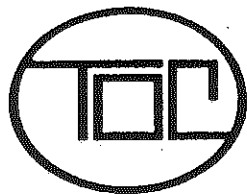
Date: September 24, 1981

Purpose: Hazardous Waste Coordinator's Training

Instructors: Roger Martin

Dan MacDonald

| Name             | Clock Number | Department       |
|------------------|--------------|------------------|
| Louis Handberg   | 53575        | EM               |
| Tim Belishe      | 55776        | 1350             |
| C. J. Nicolson   | 428          | Final Army 2123  |
| John Fekto       | 13363        | CORE MATRIX 2125 |
| Susan L. Capaul  | 52127        | Stores           |
| Marionie Hopland | 18835        | Prototype        |
| Dan J. Doe       | 53468        | P.C. FAB         |
| Dan J. Doe       | 39409        | " "              |
| Tom Burger       | 51490        | Factory Support  |
| Dennis E. Euland | 25721        | P.C. FAB         |
| W. H. Bress      | 15304        | Metal Lab        |
| B. Z. Bahr       | 12905        | ReForbismen      |
| B. B. B.         | 62107        | Environmental    |
| Roger B. B.      | 62737        | ENVIRONMENTAL    |
| Mike Melina      | 64127        | Environmental    |
| John Butner      | 59276        | Maint            |
| Edward Sweet     | 62109        | Failure Analysis |
|                  |              |                  |
|                  |              |                  |
|                  |              |                  |



**THE OPERATIONS COUNCIL**  
of American Trucking Associations, Inc.

Certifies that

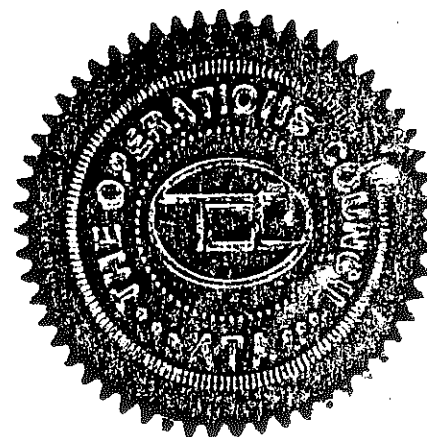
**SPERRY-UNIVAC CORPORATION**

has enrolled personnel in  
The Operations Council's

**HAZARDOUS MATERIALS  
TRAINING AND COMPLIANCE  
SEMINAR**

conducted at MINNEAPOLIS.

Their attendance is indicative of a sincere effort to  
achieve total compliance with U.S. Department of  
Transportation hazardous materials regulations.



*Paul T. Domer* *Robert J. Keegan*  
PAUL T. DOMER, EXECUTIVE DIRECTOR-TOC  
ROBERT J. KEEGAN, TRAINING DIRECTOR

# UNIVAC

## INTERCOMMUNICATION

TO: E. T. Michaud  
R. J. Martin  
R. P. Puncochar  
R. W. Nicholson

FROM (NAME & EXT): Dan MacDonald &  
Mark Wilson/4653  
LOCATION & DATE: Univac Park/3-31-77  
DEPARTMENT & M.S.: Plant Engineering/U1N14  
SUBJECT: HAZARDOUS MATERIALS  
SEMINAR

CC:

Dan MacDonald and Mark Wilson attended, as representatives of Sperry Univac, the Hazardous Materials Training and Compliance Seminar given by The Operations Council of American Trucking Association, Inc. It was presented on 25 March '77 in Roseville by Bob Keegan of The Operations Council's Training Services Division. The seminar studied on ways the new laws CFR#49 and PL93.633, which go into effect 1 July 1977, regulate the handling of hazardous materials covering the areas of: classes of hazardous materials, shipping documentation, packing, labeling and marking, and placarding. He used examples, audio visual presentations, and question and answer periods on each of the major categories of the laws explaining how they should be complied with. He also informed us of the heavy fines and possible civil actions that can take place if the regulations are not complied with.

We thought the seminar was well conducted and informative. It brought our attention to several areas of concern within Sperry Univac D.S.D. in the Twin Cities. First, our procedure for transporting hazardous materials between plants; secondly, how waste hazardous materials are shipped from Univac; thirdly, since PL93.633 states persons handling and not the company handling hazardous materials will be fined. all personnel involved should be trained.

In shipping hazardous materials between plants what Univac is responsible for must be clearly detailed and a procedure written up so all involved can be educated. It should include labeling, paper work, weight, quantity, placarding and Wintz's responsibilities. The same procedure will be completed and written up for waste hazardous material being shipped from Univac plants and correct training/procedures initiated.

The seminar did leave us with many questions in our day to day duties. With the heavy fines stipulated by PL93.633 who should sign the certification? Since we generally don't fill the waste barrels, should we have that responsibility? What guarantees us if we do sign and are fined while trying to do our jobs, that we will be reimbursed? Should we start buying reconditioned barrels, buy new ones, or continue as we are? Who will initiate this new program and train all people involved? Will we have to weigh each barrel before it leaves the plant or give approximate weights? Will we be responsible to have placard available or not? What kind of

HAZARDOUS  
MATERIALS  
SEMINAR  
PAGE 2

31 Mar '77

paper work is necessary between plants and who will supervise for all interplant shipments to be done correctly? Can we get copies of the law, so we can comply when there are questions? These questions and many more will need answering, proper procedures written up, and people involved educated before July 1, 1977.

Dan MacDonald  
Plant Engineering

*Dan MacDonald*

Mark Wilson  
Plant Engineering

*Mark E. Wilson*

**APPENDIX H-4**  
**TRUCK DRIVER TRAINING**

**ENVIRONMENTAL CONTROL PROCEDURE**

DETAIL DESCRIPTION TRUCK DRIVER'S TRAINING MANUAL

REF

ENGINEER

D. MacDonald

DATE

6/11/81

APPROVA

R.J. Martin

DATE

6/11/81

**Training Manual****Table of Contents**

- I. Introduction
  - Regulations
    - A. CFR 49 - Department of Transportation Regulations
    - B. CFR 40 - Environmental Protection Agency Regulations
    - C. Penalties and Fines
- II. General Duties
  - A. Interplant shipment of chemicals
  - B. Chemical pick up from vendors
  - C. Interplant shipment of waste chemical
  - D. Personnel
- III. Loading and Unloading
  - A. Inspection of containers
  - B. Securing containers
  - C. Shipping papers
    - 1. Hazardous Material Transfer
    - 2. Minnesota Hazardous Waste Manifest
    - 3. Bill of Lading
  - D. Compatible chemical loading
  - E. Placarding truck
- IV. Accidents Procedure
  - A. Dock accidents
  - B. Accidents on the road
- V. Radio Instruction



# ENVIRONMENTAL CONTROL PROCEDURE

|                                |         |                    |         |
|--------------------------------|---------|--------------------|---------|
| DETAIL DESCRIPTION             |         | REF                |         |
| TRUCK DRIVER'S TRAINING MANUAL |         |                    |         |
| ENGINEER                       | DATE    | APPROVAL           | DATE    |
| Don McDonald                   | 6/11/81 | [Signature] Martin | 6/11/81 |

## APPENDIXS

- I. CFR 49 Part 172.200 - 172.406 and 177
- II. CFR 40 Part 263
- III. Schedule
- IV. "Waste Chemical" label
- V. Hazardous Material Transfer  
ECP 37004
- VI. Minnesota Hazardous Waste Manifest
- VII. Hazardous Material Bill of Lading
- VIII. Chemical Compatibility Guideline - Placarding Guide
- IX. List of approved signatures for shipping
- X. List of necessary telephone numbers
- XI. List of vendor telephone numbers and addresses
- XII. Chemical and Hazardous Material Emergency Response Procedure

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION

TRUCK DRIVER'S TRAINING MANUAL

REF

ENGINEER

Dan McDonald

DATE

6/11/81

APPROVAL

M. Martin

DATE

6/11/81

## Hazardous Materials Training

## I. Introduction - Discussion of Regulations

All shipping of hazardous materials are covered by the U.S. government regulations CFR (Code of Federal Regulations) 49 issued by DOT (Department of Transportation) and CFR 40 issued by EPA (Environmental Protection Agency). The regulations are very specific on hazardous material handling. Penalties for non-compliance of these regulations are included in these regulations.

CFR 49 covers all aspects of Hazardous Materials transportation. It includes:

1. Penalties - Methods of enforcement
2. Law making
3. Exemptions
4. List of Hazardous Materials - Part 172
5. Shippers Requirements - Part 173 - (Appendix I)
6. Shipping by:
  - A. Rail
  - B. Aircraft
  - C. Vessel
  - D. Public Highway - Part 177 (Appendix I)
7. Shipping containers specifications - Part 178
8. Specifications for tank cars

CFR 40 covers all aspects of waste hazardous material handling. All regulations covering transporters is covered in Part 263. This regulation incorporates CFR 49 by reference. It covers:

1. EPA transporter identification number
2. Manifest system
3. Recordkeeping
4. Waste discharges and clean up

These regulations have stiff penalties. The maximum penalties set by CFR 49 - (107.343) for a "person who knowingly violates a requirement." is \$10,000 for each violation. If it is a continuing violation, each day is a separate violation. For a willful violation of regulations the violation is considered a criminal offense and the penalty is not more than \$25,000 and not more than 5 years of imprisonment. Knowingly would be an accidental violation of regulations. A willful violation would be a case where a person sets out to violate the law on purpose.

Penalties set by CFR 40 part 117 for a violations for a civil penalty is up to a \$5,000 fine per discharge. If the violation was found to be a willful one a fine of \$250,000 can be set. If there is a failure to notify a reportable quantity a \$10,000 fine or a one year imprisonment or both. Regulations also states that the discharger is liable for the cost of clean up, injury to people and damage to property.

## ENVIRONMENTAL CONTROL PROCEDURE

|                                |                |                |
|--------------------------------|----------------|----------------|
| DETAIL DESCRIPTION             |                | REF            |
| TRUCK DRIVER'S TRAINING MANUAL |                |                |
| ENGINEER                       | DATE           | DATE           |
| <i>Don Mc Donald</i>           | <i>6/11/81</i> | <i>6/11/81</i> |
| APPROVAL                       |                |                |
| <i>[Signature]</i>             |                | <i>Martin</i>  |

### II. General Duties - Truck Drivers

Generally the duties include transporting all interplant shipments of chemicals. This includes transporting all new chemicals between facilities and all waste chemicals going to Shepard Road for waste disposal. The chemical truck will also be used to pick up chemicals at vendors warehouses. A chemical dock coordinator will be responsible for determining what goes on and off the truck. Inventory control will inform the chemical dock coordinator of the need for a chemical pick up. The chemical coordinator at Shepard Road will schedule the route for the day.

### III. Loading and Unloading

The truck driver is responsible to see that the chemicals are properly loaded, secured and unloaded. All containers should be inspected and checked that they have the proper shipping name marked on container and that all labels needed are attached. No leaking containers should be allowed to be loaded onto the truck. All containers should be secured on the trailer so they cannot shift during transportation.

With all shipments of hazardous materials, very specific and properly filled out paperwork must be provided. The truck driver has several responsibilities in handling this paper work. When a load of hazardous materials is picked up, the truck driver should get a Hazardous Material Transfer (HMT) and make sure it is properly filled out and matches what is placed on the truck. The procedure for checking the HMT is shown in Appendix V.

If everything is correct, the carrier (Truck driver) signs in the carrier slot. When the load leaves the dock, the white copy of the HMT should be with the truck driver in the cab. The golden rod copy is kept by the originator, the yellow and pink copies go with the containers in the truck. At its destination the receiver gets the pink copy and Environmental Management gets the yellow copy.

If any material is loaded with a "Waste Chemical" label (appendix XI) on a container, a Minnesota Hazardous Waste Shipping Paper (Appendix VI) must accompany the shipment. This form must also be filled out correctly. Make sure all appropriate blanks are filled in. See Appendix VI for completion of Minnesota Hazardous Waste Manifest.

When picking up hazardous materials from vendors, they must provide the driver with a Hazardous Materials Bill of Lading (Appendix VII). It must be filled out completely, the same as HMT. Check the numbers of containers, description, labels and certification and then sign the paper leaving the appropriate copy with the vendor.

The chemical dock coordinator will be in charge of making sure there are no incompatible chemicals placed on the truck. This manual includes a guide

## ENVIRONMENTAL CONTROL PROCEDURE

|                     |                |                                |                |     |
|---------------------|----------------|--------------------------------|----------------|-----|
| DETAIL DESCRIPTION  |                | TRUCK DRIVER'S TRAINING MANUAL |                | REF |
| ENGINEER            | DATE           | APPROVAL                       | DATE           |     |
| <i>Don McDonald</i> | <i>6/11/81</i> | <i>[Signature]</i>             | <i>6/11/81</i> |     |

(Appendix VIII) that shows which chemicals are incompatible. Refer to it if there are any questions.

The chemical dock coordinator will also be responsible for instructing the driver which placards to use on the truck. Refer to the opposite side of the chemical guide (Appendix VIII) provided. It explains how the trucks should be placarded.

#### IV. Accidents Procedure

By law at least one person must supervise the loading and unloading of hazardous materials. This is required in case of an accident. If an accident occurs, notify the chemical dock coordinator immediately. A spill should be contained if possible.

Also the area of the spill should be cleared of all personnel not involved. Use the Chemical and Hazardous Materials Emergency Response Procedure (Appendix XII) for reference on what to do and how to handle the accident.

At all times when traveling on the road the paper work for the load must be on the seat next to the driver or in a pouch on the driver's door. This is in case of an accident and the driver is indisposed. If an accident such as an overturn, leak or fire occurs, radio or telephone to get instructions on what to do immediately. Keep area clear of personnel not involved and warn all others of the hazards. Give required information to any officials that arrive on the scene to help in taking care of the incident.

#### VI Instructions for use of the Motorola Pageboy.

The motorola pageboy is a voice and tone receiver unit which enables personnel to be reached in the Twin City Metro Area.

Each pageboy unit has an individual ID on the top of the unit, for example "Pager 23". A message encoded for Pager #23 will only be heard by that unit.

All requests for pageboy activation should be made to the BMS Room Ext. 4812, Ext. 2101, or Ext. 4548 at Univac Park, Eagan. If there are any questions concerning the message received on the pageboy, call one of those numbers.

##### Operation of the Pageboy:

1. Each day insure that the unit is fully charged and/or has a freshly charged set of batteries in it prior to operation.
2. Turn the unit on and a squelch/static noise can be heard. Depress the reset button and the unit is now in a quiet mode and ready to receive messages.
3. Upon receipt of the message for the pageboy, an electronic tone will be

**ENVIRONMENTAL CONTROL PROCEDURE**

|                    |      |                                |  |      |  |
|--------------------|------|--------------------------------|--|------|--|
| DETAIL DESCRIPTION |      | TRUCK DRIVER'S TRAINING MANUAL |  | REF  |  |
| ENGINEER           | DATE | APPROVAL                       |  | DATE |  |

heard followed by the specific voice message. After completion of the message the squelch (static noise) will return as a reminder to depress the reset button. The unit is now ready to receive future messages.

4. If there are any problems or if the pageboy needs repair, return it to the Environmental Manager. Do not attempt to repair the unit. Sperry Univac has a repair agreement with Motorola.

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |                      |                                |               |                     |
|--------------------|----------------------|--------------------------------|---------------|---------------------|
| DETAIL DESCRIPTION |                      | TRUCK DRIVER'S TRAINING MANUAL |               | REF                 |
| ENGINEER           | <i>Dan MacDonald</i> | DATE                           | <i>7/6/81</i> | APPROVAL            |
|                    |                      |                                |               | <i>Roger Martin</i> |
|                    |                      |                                |               | DATE                |
|                    |                      |                                |               | <i>7/6/81</i>       |

## Appendix X

| <u>Personnel</u>       | <u>Pager</u> | <u>Phone Number</u> |
|------------------------|--------------|---------------------|
| Roger Martin           | 535          | 456-4654            |
| Dan MacDonald          | 915          | 647-4714            |
| Jack Ziemet            | 536          | 456-4664            |
| Bill Polta             | 905          | 647-4656            |
| Mark Wilson            | 565          | 456-4220            |
| BMS Room (Paging)      |              | 456-4812            |
| Medical (Shepard Road) |              | 647-4081            |
| Medical (Univac Park)  |              | 456-2560            |
| Medical (Midway)       |              | 641-7870            |
| Tony Parker            |              | 641-7793            |
| Jerry Bryse            |              | 647-4426            |

## ATTENTANCE ROSTER

Date: 2/1/84

Purpose: Truck Driver Training

Instructors: Dan MacDonald

[illegible]

## ATTENDANCE ROSTER

Date: April 27, 1983

**Purpose:** HAZARDOUS MATERIAL TRUCK DRIVER TRAINING

**Instructors:** Dan MacDonald

[illegible]





UNIVAC PARK, P.O. BOX 3525  
ST. PAUL, MINNESOTA 55185  
TELEPHONE (612) 456-2222

## CHEMICAL TRUCK DRIVERS TRAINING

THIS DOCUMENT CERTIFIES THAT I HAVE COMPLETED  
APPROXIMATELY 16 HOURS OF HAZARDOUS MATERIAL  
TRAINING FOR HAULING CHEMICALS.

THIS TRAINING WAS PROVIDED FROM ENVIRONMENTAL  
MANAGEMENT ECP 37016. INCLUDED WAS TRAINING  
REQUIRED FOR CFR 40 PART 264.

ATTENDEE'S

TIMOTHY L. STOFFEL

CARY C. YOUNG

*Timothy L. Stoffel*  
*Cary C. Young*

*Dan MacDonald*  
INSTRUCTOR DAN MACDONALD

APPENDIX H-5  
TRAINING MOVE CREW AND JANITORS

## ENVIRONMENTAL CONTROL PROCEDURE

|                                 |         |             |         |
|---------------------------------|---------|-------------|---------|
| DETAIL DESCRIPTION              |         |             | REF     |
| Training Move Crew and Janitors |         |             |         |
| ENGINEER                        | DATE    | APPROVAL    | DATE    |
| Don MacDonell                   | 12/7/81 | [Signature] | 12/7/81 |

### I. Introduction

### II. Waste Pick up

- A. Only move crew moves waste chemicals
- B. Waste Chemical Label
  - 1. Must be completely filled out
  - 2. Must be signed
  - 3. Show Appendix I (Waste Chemical Label)
- C. Waste Chemical Containers
  - 1. Must get containers from Environmental Management personnel
  - 2. Do not reuse chemical container.

### III. Shipping Requirements

- A. Dedicated truck for hazardous materials
  - 1. Items shipped on truck
    - a. Hazardous materials
    - b. All empty containers for hazardous materials
  - 2. Truck drivers trained
- B. Thing to watch for when loading
  - 1. Labeling of containers
  - 2. Hazardous Material Transfer completed and signed
  - 3. Waste chemicals - Minnesota Waste Manifest
  - 4. Do not load leaking container on any truck.
- C. Chemical Dock Coordinator

### IV. Spill Control Procedures

- A. Contact Guards at Emergency Telephone number
  - 1. Shepard Road X4400
  - 2. Midway X3000
  - 3. Univac Park X3000
- B. Contain spill if it can be done safely
- C. Keep area clear until other personnel arrives
- D. Environmental Management will clean up. Have chemical knowledge and equipment to handle.

# ENVIRONMENTAL CONTROL PROCEDURE

|   |                  |          |      |
|---|------------------|----------|------|
| DETAIL DESCRIPTION<br>Training Move Crew and Janitors |                  | REF      |      |
| ENGINEER<br><i>Don MacDonell</i>                      | DATE<br>12/17/81 | APPROVAL | DATE |

## HAZARDOUS MATERIALS TRAINING

### Move Crew and Janitors

#### I. Introduction

In this training session you will learn how to handle hazardous materials in your job. You need to take extra care when handling these materials. The move Crew serves as an important part of our hazardous material handling procedures.

#### II. Waste Pick Up

Move crew provides an important service for Environmental Management when you follow the correct procedure when moving hazardous waste to our area's for disposal. Only the move crew is allowed to move waste chemicals within our facilities. The waste chemical must have a waste chemical label attached and completely filled out before the container is moved.

Empty waste containers are obtained from Environmental management personnel. Reuse of chemical containers for waste disposal is not allowed.

#### III. Shipping Requirements

A dedicated hazardous materials truck now moves all hazardous materials between facilities. It also moves all empty hazardous materials containers. The truck drivers received training in hazardous materials.

When loading the trucks you need to watch for several things. All containers need proper labeling. All materials moved on to truck must have a completed and signed hazardous material transfer (HMT). All waste chemicals must have a Minnesota Waste Manifest. Leaking containers cannot be moved on a truck.

A chemical dock coordinator from the Environmental Department will dispatch hazardous materials truck. He is also responsible for supervising the loading and unloading of chemicals at facilities.

#### IV. Spill Control Procedures

A spill control procedure is implemented to handle a spill of hazardous material. In case of a spill, contact the Guard on the emergency telephone number:

| ENVIRONMENTAL CONTROL PROCEDURE  |      |          |      |
|--|------|----------|------|
| DETAIL DESCRIPTION   |      |          | REF  |
| ENGINEER   | DATE | APPROVAL | DATE |
| <p>Shepard Road X4400<br/> Midway X3000<br/> Univac Park X3000</p> <p>Contain a spill if you can do it safely. Keep area clear of other personnel until more help arrives. The Environmental Management group is set up with equipment and trained personnel to handle a hazardous material spill.</p> |      |          |      |

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |      |          |      |
|--------------------|------|----------|------|
| DETAIL DESCRIPTION |      | REF      |      |
| ENGINEER           | DATE | APPROVAL | DATE |

### APPENDIXS

- I. Waste Chemical Label
- II. Hazardous Material Transfer
- III. Minnesota Waste Manifest

## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE

CHEMICAL HANDLER CERTIFICATION

AREA

CORPORATE SQUARE

TRAINING GOAL:

To provide sufficient training for employees who must transport hazardous materials through communally used hallways.

JOB CLASSIFICATION OF TRAINEES

MOVE CREW/ JANITORS / CRIB

TRAINING FREQUENCY

METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

PROCESS DESCRIPTION:

SLIDE CASSETTES:

- Hazardous Material Transport Rules
- Hazardous Material Identification System
- Safe Handling and Storage of Compressed Gases
- Waste Management Slide

FILM:

- Danger Zone Your Back

PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

INSTRUCTOR'S NAME AND QUALIFICATIONS:

Ronald W. Berndt - Sr. Industrial Hygiene Engineer DSD  
Tom Gehl - Industrial Hygiene Engineer intern DSD

REMARKS

Total training time -- about 3 1/2 hours

# OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

RONALD W. BERNDT/TOM P. GEHL

DATE \_\_\_\_\_

8/4/83

### DESCRIPTION OF TRAINING

# CHEMICAL TRANSPORT TRAINING

HOURS OF INSTRUCTION

3 1/2

[illegible]



## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE

CHEMICAL HANDLER CERTIFICATION

AREA

CORPORATE SQUARE

TRAINING GOAL:

To provide sufficient training for employees who must transport hazardous materials through communally used hallways.

JOB CLASSIFICATION OF TRAINEES

MOVE CREW/ JANITORS / CRIB

TRAINING FREQUENCY

METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

PROCESS DESCRIPTION:

SLIDE CASSETTES:

- Hazardous Material Transport Rules
- Hazardous Material Identification System
- Safe Handling and Storage of Compressed Gases
- Waste Management Slide

FILM:

- Danger Zone Your Back

PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

INSTRUCTOR'S NAME AND QUALIFICATIONS:

Ronald W. Berndt - Sr. Industrial Hygiene Engineer DSD  
Tom Gehl - Industrial Hygiene Engineer intern DSD

REMARKS

Total training time -- about 3 1/2 hours

# OPERATIONS TRAINING RECORD

[illegible]

## TRAINING SYNOPSIS STATEMENT

|                                |         |
|--------------------------------|---------|
| TRAINING TITLE                 | AREA    |
| CHEMICAL HANDLER CERTIFICATION | PLANT 8 |

## TRAINING GOAL:

To provide sufficient training for employees who must transport hazardous materials through communally used hallways.

|                                |                    |
|--------------------------------|--------------------|
| JOB CLASSIFICATION OF TRAINEES | TRAINING FREQUENCY |
| MOVE CREW /JANITORS /CRIB      |                    |

## METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

## PROCESS DESCRIPTION:

SLIDE CASSETTES - Hazardous Material Transport Rules  
- Hazardous Material Identification System  
- Safe Handling and Storage of Compressed Gases  
- Waste Management Slides

FILM - Danger Zone Your Back

## PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

## INSTRUCTOR'S NAME AND QUALIFICATIONS:

Ronald W. Berndt - Sr. Industrial Hygiene Engineer DSD  
Roscoe Evavold - Manager of Occupational Health Programs DSD  
Dan Mac Donald - Environmental Management DSD Tim Morris - Safety

## REMARKS

Engineer - Semi-Conducto

Total training time -- about 3 1/2 hours.

OPERATIONS TRAINING RECORD

| INSTRUCTOR'S NAME           |                 |              | DATE              |                 |              |
|-----------------------------|-----------------|--------------|-------------------|-----------------|--------------|
| RONALD W. BERNDT            |                 |              | 6-21-83           |                 |              |
| DESCRIPTION OF TRAINING     |                 |              |                   |                 |              |
| CHEMICAL TRANSPORT TRAINING |                 |              |                   |                 |              |
| HOURS OF INSTRUCTION        |                 |              |                   |                 |              |
| 3 1/2                       |                 |              |                   |                 |              |
|                             |                 |              | Mail Stop         |                 | Shift        |
| PARTICIPANTS NAME           | EMPLOYEE NUMBER | ORGANIZATION | PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION |
| Greg Nelson                 | 611/98          | 1350         | 51521             |                 | 29           |
| Michael Tjans               | 57044           | 1350         | 51521             |                 | 27           |
| Warren Pace                 | 57514           | 1350         | 51521             |                 | 27           |
| Joe CAPKO                   | 16904           | 1350         |                   |                 | 27           |
| Manuel Morales              | 31203           | 1350         |                   |                 | 27           |
| BRUCE LEEDERLINE            | 61677           | 1350         | PLT 24 SHFT       | 51521           | 29           |
| Bruce Tjans                 | 52664           | 1350         | UOT26             |                 | 25           |
| Don. Samuels                | 55857           | 1350         | UOT26             |                 | 27           |
| Edward Tjans                | 31115           | 1350         | CCD15             |                 | 25           |
| DAVE HELD                   | 80151           | 1350         | CCD15             |                 | 26           |
| Audrey Carlson              | 58070           | 1350         | CCD15             |                 | 26           |
| * John Harg                 | 55829           | 1350         | CCD15             |                 | 24           |
| John A. Fahl                | 61494           | 1350         | CCD15             |                 | 26           |
| * Tam Cahoon                | 61629           | 1350         | CCD15             |                 | 21           |
| Chandra Rummel              | 27771           |              | PLT CRIB          |                 | 25           |
| Ed Ferguson                 | 15336           | 1350         | CCD15             |                 | 28           |
| * Roy D. Lohr               | 52549           | 1350         |                   |                 | 23           |
| * Gary Medsker              | 55805           | 1350         | CCD15             |                 | 20           |
| Raphael Mechtel             |                 |              |                   |                 |              |
| RJ Koester                  | 15382           |              |                   |                 | 27           |
|                             |                 |              |                   |                 |              |
|                             |                 |              |                   |                 |              |
|                             |                 |              |                   |                 |              |
|                             |                 |              |                   |                 |              |
|                             |                 |              |                   |                 |              |
|                             |                 |              |                   |                 |              |

## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE

AREA

CHEMICAL HANDLER CERTIFICATION

PLANT 8

TRAINING GOAL:

To provide sufficient training for employees who must transport hazardous materials through communally used hallways.

JOB CLASSIFICATION OF TRAINEES

TRAINING FREQUENCY

MOVE CREW / JANITORS / CRIB

METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

PROCESS DESCRIPTION:

SLIDE CASSETTES - Hazardous Material Transport Rules  
- Hazardous Material Identification System  
- Safe Handling and Storage of Compressed Gases  
- Waste Management Slides

FILM - Danger Zone Your Back

PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

INSTRUCTOR'S NAME AND QUALIFICATIONS:

Ronald W. Berndt - Sr. Industrial Hygiene Engineer DSD  
Roscoe Evavold - Manager of Occupational Health Programs DSD  
Dan Mac Donald - Environmental Management DSD Tim Morris - Safety

REMARKS

Engineer - Semi-Conductor

Total training time -- about 3 1/2 hours.

# OPERATIONS TRAINING RECORD

[illegible]

## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE

CHEMICAL HANDLER CERTIFICATION

AREA

PLANT 8

TRAINING GOAL:

To provide sufficient training for employees who must transport hazardous materials through communally used hallways.

JOB CLASSIFICATION OF TRAINEES

MOVE CREW /JANITORS /CRIB

TRAINING FREQUENCY

METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

PROCESS DESCRIPTION:

SLIDE CASSETTES - Hazardous Material Transport Rules  
- Hazardous Material Identification System  
- Safe Handling and Storage of Compressed Gases  
- Waste Management Slides

FILM - Danger Zone Your Back

PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

INSTRUCTOR'S NAME AND QUALIFICATIONS:

Ronald W. Berndt - Sr. Industrial Hygiene Engineer DSD  
Roscoe Evavold - Manager of Occupational Health Programs DSD  
Dan Mac Donald - Environmental Management DSD Tim Morris - Safety

REMARKS

Engineer - Semi-Conductor

Total training time -- about 3 1/2 hours.

## OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

RONALD W. BERNDT

DATE \_\_\_\_\_

6/8/83

### DESCRIPTION OF TRAINING

# CHEMICAL TRANSPORT TRAINING

### HOURS OF INSTRUCTION

3 1/2

[illegible]



## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE

Chemical Transport Certification Program

AREA

Sperry Park

TRAINING GOAL:

To train move crew on proper and safe methods of handling and moving hazardous chemicals.

JOB CLASSIFICATION OF TRAINEES

Move Crew

TRAINING FREQUENCY

METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

PROCESS DESCRIPTION:

Move chemicals from stores to work areas

PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

INSTRUCTOR'S NAME AND QUALIFICATIONS:

Ronald W. Berndt

Dan Mac Donald

REMARKS



# OPERATIONS TRAINING RECORD

NAME

Erndt/Roscoe Evavold/Tim Morris/Dan MacDonald

DATE 05/13/83

## PLAN OF TRAINING

# Chemical Handler Certification

OF INSTRUCTION **MOVIE - DANGER LINE YOUR BACK**

SLIDE - HAZARDOUS MATERIAL TRANSPORT RULES, HMDF, Safe Handling of Compressed Gases

[illegible]

## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE

Chemical Transport Certification Program

AREA

TRAINING GOAL:

Inform employees of proper chemical handling procedures.

JOB CLASSIFICATION OF TRAINEES

TRAINING FREQUENCY

METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

PROCESS DESCRIPTION:

Moving of chemicals from stores to work -area.

PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☒ WRITTEN TEST☐ SITUATIONAL OBSERVATION

INSTRUCTOR'S NAME AND QUALIFICATIONS:

John Davis - Safety Engineer

Ron Berndt - Industrial Hygienist

REMARKS

This training was scheduled so that the supervisors who would have employees in training could give their impressions of the training.

## OPERATIONS TRAINING RECORD

8-23-82

DESCRIPTION OF TRAINING PROGRAM

3 HOURS

UD1-2721 (REV 12/73) PAGE 341

O U T L I N E

INTRODUCTION:

JOHN & RON

1. CHEMICAL HAZARDS SLIDES
2. CHART AND CARD NON COMPATIBLE
3. SAFE HANDLING  
Cylinders  
Drums
4. SAFE DRUM HANDLING - SLIDES

ROGER & DAN

5. WASTE PICK UP.
6. SHIPPING REQUIREMENTS - TRUCK.
7. SPILL CONTROL PROCEDURES.

JOHN & RON

8. FIRST AID.

ROGER & DAN  
JOHN & RON

9. QUESTIONS

3:30 Monday, Tuesday, Wednesday - July 6, 7, 8, 1981

EQUIPMENT:

SLIDE PROJECTOR  
TAPE PLAYER  
SCREEN

JCD/pyg

## DRUM HANDLING SAFETY

### Response sheet

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Your foot<br><input type="checkbox"/> Your body                      | 6. <input type="checkbox"/> Cross hands and feet<br><input type="checkbox"/> Don't cross hands or feet |
| 2. <input type="checkbox"/> Hands together<br><input type="checkbox"/> Hands apart               | 7. <input type="checkbox"/> Body close<br><input type="checkbox"/> Body far away                       |
| 3. <input type="checkbox"/> Bare hands<br><input type="checkbox"/> Wear gloves                   | 8. <input type="checkbox"/> Body ahead<br><input type="checkbox"/> Body behind                         |
| 4. <input type="checkbox"/> Pull<br><input type="checkbox"/> Push                                | 9. <input type="checkbox"/> Yes<br><input type="checkbox"/> No   |
| 5. <input type="checkbox"/> At chime height<br><input type="checkbox"/> Higher than chime height | 10. <input type="checkbox"/> At chime height<br><input type="checkbox"/> Higher than chime height      |

### Review Section

- |  |   |
|--|---|
| 1. Breaking drums<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No | 3. Palletizing drums<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No |
| 2. Rolling drums<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No  | 4. Dumping drums<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No     |

-----

## DRUM HANDLING SKILLS

- |   |  |
|---|--|
| 1. Breaking drums<br>- Hands apart<br>- Shoulder: chime height<br>- Body close                | 3. Palletizing drums<br>- Bottom chime high<br>- Shoulder low, close to drum<br>- Watch for pinch points |
| 2. Rolling drums<br>- Proceed slowly<br>- Body close and ahead<br>- Don't cross hands or feet | 4. Dumping drums<br>- Body moves forward with drum<br>- Hands on top and bottom chimes                   |

k4616B-7

START: 3:30 PM  
Finish: 4:40 PM

# ATTENDANCE ROSTER

Date: 6 Jul 81

Purpose: Chemical Handling Class - Move Crew/Janitorial Crew  
Training requirements according to 40 CFR264.16

Instructors: Dan E. MacDonald

John C. Davis

Roger J. Martin

Ronald W. Berndt

| Name             | Clock Number | Department |
|------------------|--------------|------------|
| Don Lomick       | 55857        | MOVE CREW  |
| Charlie          | 37769        | move crew  |
| Edmund Scypinski | 37524        | Janitor    |
| Wm J. J. J. J.   | 61657        | "          |
| Paul Chapman     | 37553        | 1350       |
| Julie Entenmann  | 61694        | 1350       |
| James Tachak     | 80016        | 1350       |
| John W. W.       | 80032        | 1350       |
| Emmanuel         | 80020        | 1350       |
| KENT E ANDERSON  | 61073        | 1350       |
| Jim Halbler      | 55753        | 1350       |
| Julie Brundshaw  | 80007        | 1350       |
| Joseph Wilking   | 61544        | 1350       |
| Robert R.        | 80005        | 1350       |
| Robert Allen     | 80021        | 1350       |
| Pat Peters       | 61486        | 1350       |
| Roger R.         | 61657        | 1350       |
| Steve Capron     | 55825        | "          |
| Ray Banta        | 58074        | 1310       |
| Vernon W. W.     | 24268        | 1350       |

5

ATTENDANCE ROSTER

Date: 6 Jul 81

Purpose: Chemical Handling Class - Move Crew/Janitorial Crew  
Training requirements according to 40 CFR264.16

Instructors: Dan E. MacDonald

John C. Davis

Roger J. Martin

Ronald W. Berndt

| Name              | Clock Number | Department |
|-------------------|--------------|------------|
| BOB MERCK         | 58321        | MOVE CREW  |
| Dan Dahm          | 61652        | Janitor    |
| Jerry S Samuelson | 61540        | Move Crew  |
| Kevin Mulligan    | 61661        | Janitor    |
| Joe Hoop          | 80026        | 1350       |
| Liquid Store      | 61076        | 1350       |
| Terry Lachman     | 80044        | CORP SGR   |
| Clemente          | 61422        | 1350       |
| Al Sletten        | 61458        | 1350       |
| John Mohscho      | 60498        | 39973      |
| Q. McFarland      | 50427        | 1350       |
| J. Buckshaw       | 80023        | 1350       |
| Al Patel          | 58030        | 1350       |
| Peter Cook        | 50924        | 1350       |
| L. Patel          | 61690        | 1350       |
| Theresa McFarland | 16325        | 1350       |
| Mike Tim          | 58049        | 1350       |
| Theresa Rider     | 80010        | 1350       |
| Ed Hansen         | 55758        | 1350       |
| Mike Teller       | 61479        |            |



# ATTENDANCE ROSTER

Date: 6 Jul 81

Purpose: Chemical Handling Class - Move Crew/Janitorial Crew  
Training requirements according to 40 CFR264.16

Instructors: Dan E. MacDonald  
Roger J. Martin

John C. Davis  
Ronald W. Berndt

| Name           | Clock Number | Department |
|----------------|--------------|------------|
| J. Lynn Cross  | 55829        | Gen. Labor |
| Don Erickson   | 22262        | Crib       |
| Jon Kusummo    | 61681        | Gen Labor  |
| John Hermann   | 8995         | Janitor    |
| Ed. Schlosser  | 61659        | Gen Labor  |
| Keith Bepko    | 80043        | Gen Labor  |
| Gerry Small    | 61675        | 1350       |
| Howard Zapp    | 80027        | 1350       |
| Joe Bachman    | 61688        | Corp       |
| Audrey Carlson | 58072        | 4          |
| Dale Helms     | 61649        | Janitor    |
| Eugene Danner  | 61664        | Corp. Sp.  |
| GEORGE BRACH   | 38813        | CORP. SQ.  |
|                |              |            |
|                |              |            |
|                |              |            |
|                |              |            |
|                |              |            |
|                |              |            |
|                |              |            |
|                |              |            |

4:21

# ATTENDANCE ROSTER

Date: 7/7/81

Purpose: Chemical Handling Class - Move Crew/Janitorial Crew  
Training requirements according to 40 CFR264.16

Instructors: Dan E. MacDonald  
Roger J. Martin

John C. Davis  
Ronald W. Berndt

| Name               | Clock Number | Department          |
|--------------------|--------------|---------------------|
| Robert Penkman     | 36180        | Janitor             |
| George P. Richie   | 52640        | Move Crew           |
| Chris Clarke       | 37254        | " "                 |
| Mr. Eugene Morris  | 35990        | " "                 |
| R. Chargin         | 33169        | Janitor             |
| Scott P. W. Lagan  | 61517        | Move Crew           |
| Mark Klingbeil     | 61663        | "                   |
| Don. Lavinie       | 12415        | "                   |
| Gregg Davis        | 61158        | "                   |
| Shirley Baines     | 51211        | Janitor             |
| Don. Wamacha       | 61573        | Jan                 |
| Charles A. Maitel  | 55767        | Janitor             |
| Michael E. Mow     | 61582        | Janitor             |
| Eric Goetz         | 80036        | Janitor             |
| Bill Garcia        | 80018        | Janitor             |
| James S. Bernick   | 59574        | Janitor             |
| Rebecca C. Shelton | 80029        | Janitor             |
| Steve Mohr         | 80046        | Janitor             |
| Mark Hill          | 41169        | Amputation Engineer |
| Mark Novak         | 61637        | SAME AS ABOVE       |

# ATTENDANCE ROSTER

Date: 7/7/81

Purpose: Chemical Handling Class - Move Crew/Janitorial Crew  
Training requirements according to 40 CFR264.16

Instructors: Dan E. MacDonald

John C. Davis

Roger J. Martin

Ronald W. Berndt

| Name              | Clock Number     | Department |
|-------------------|------------------|------------|
| John F. Hemming   | 61660            | Janitor    |
| Dan Carson        | 61402            | Janitor    |
| Lloyd E. Erickson | 51938            | 1350       |
| Dan Carlander     | 80032            | Sanitor    |
| Joe Holgermer     | 61623            | Janitor    |
| Fred Lulline      | 61159            | Janitor    |
| Dan Carlson       | 37781            | 1350       |
| Jim A. Finckh     | 62494            | 1350       |
| Dan Mayers        | 61532            | 1350       |
| Robert W. Balle   | 37081            | 1350       |
| Don O. Oja        | <del>61451</del> | 1350       |
| Bill Oja          | 61450            | 1350       |
| Jeff Haines       | 12452            | 1350       |
|                   |                  |            |
|                   |                  |            |
|                   |                  |            |
|                   |                  |            |
|                   |                  |            |
|                   |                  |            |
|                   |                  |            |
|                   |                  |            |

# ATTENDANCE ROSTER

Date: 7/8/81

Purpose: Chemical Handling Class - Move Crew/Janitorial Crew  
Training requirements according to 40 CFR264.16

Instructors: Dan E. MacDonald

John C. Davis

Roger J. Martin

Ronald W. Berndt

| Name            | Clock Number | Department  |
|-----------------|--------------|-------------|
| Bruce Kline     | 61695        | Janitorial  |
| Norm Koon       | 80025        | 11          |
| Earl Krueger    | 61584        |             |
| Jerry D. Belden | 36381        | Janitor     |
| Paul Malnati    | 61674        | Janitor     |
| T. Grundtner    | 80017        | Jan. Serv.  |
| Samuel Kimbrell | 11419        | JANITOR     |
| Raphael Meador  | 55805        | P/L Sev     |
| L. Washington   | 31607        | Janitor     |
| W.E. Jackson    | 4588         | Spec. Clean |
| Bruce A. Glick  | 32668        | DIT SERV.   |
| Paul Zeller     | 80038        | Janitorial  |
| M. Morales      | 31203        | Janitorial  |
| R. J. Koster    | 15382        | move crew   |
| Wayne M. Davis  | 80045        | Janitor     |
| John Whitman    | 19116        | BAC. MAINT. |
| Thomas P. King  | 11196        | Janitor     |
|                 |              |             |
|                 |              |             |

APPENDIX H-6

TRAINING HAZARDOUS MATERIALS COORDINATORS

## ENVIRONMENTAL CONTROL PROCEDURE

## DETAIL DESCRIPTION

HAZARDOUS MATERIALS COORDINATOR TRAINING

REF

ENGINEER

Dan MacDonald

DATE

3/28/83

APPROVAL

Marta

DATE

4/4/83

- I. Introduction - Environmental Management
- II. Coordinators Duties
  - A. Waste Chemical Labeling - explain how to properly fill out label.
  - B. Regulations - explain new regulations.
  - C. Enforcement.
- III. Information Systems - MAPPER
  - A. Information Available
    1. Hazardous Material Information.
      - a. Shipping Information - Rid Type B
      - b. Safety Information - Rid Type I
    2. Hazardous Waste Dock Log
      - a. Solvent Separation
    3. Hazardous Material Inventory
  - B. Access - J HMDF, 100, DATA
- IV. New Chemical Ordering Procedure
  - A. Order Form
  - B. Chemicals in system requisition to Inventory Supply
- V. Inter-Plant Truck-Hazardous Material
  - A. Hazardous Material only.
  - B. Truck driver trained on hazardous materials.
  - C. Hazardous materials dock coordinator.
- VI. Spill Procedure
  - A. Call Emergency Number x3000

# ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION  
HAZARDOUS MATERIALS COORDINATOR TRAINING

REF

ENGINEER  
Dan E. MacDonald

DATE  
3/28/83

APPROVAL

DATE

## APPENDIX

- I. WASTE CHEMICAL LABEL
- II. RID TYPE B
- III. RID TYPE I
- IV. RID TYPE C
- V. HMDF ACCESS
- VI. NEW CHEMICAL ORDER FORM

## ENVIRONMENTAL CONTROL PROCEDURE

### DETAIL DESCRIPTION

Hazardous Materials Coordinator Training

REF

ENGINEER

*Jan MacDonald*

DATE

*12/14/81*

APPROVAL

DATE

### Itinerary

- I. Introduction
  - A. Regulation - Hazardous Materials
  - B. Review - Updating old procedures
  - C. Explain new procedures
  - D. Introduce Environmental Management Personnel
- II. Hazardous Material Disposal
  - A. Hazardous Material Coordinators Duties - (Hand out)
  - B. Facilities used
  - C. Hazardous Material Disposal Procedure
  - D. New Methods Disposal
- III. Ordering New Chemicals
  - A. Follow DSD Procedure M.M.
  - B. Information inputted HMDF
- IV. Hazardous Material Interplant Truck
  - A. Dedicated Hazardous Material Truck
  - B. Pick up from vendors
- V. Spill Procedure ECP 37009
  - A. Contact Guards in Event of Spill
  - B. Or Environmental Management
  - C. Have equipment and personnel to clean up.
- VI. Requirements of Coordinators
  - A. All personnel using hazardous materials must have training and must be recorded. Rooster - 1 week new chemical.
  - B. Will be sending out old list chemical usage need it updated and returned.
  - C. Help in communicating new chemicals and new processes.
- VII. Conclusion



## ENVIRONMENTAL CONTROL PROCEDURE

|  |         |          |      |
|--|---------|----------|------|
| DETAIL DESCRIPTION                       |         | REF      |      |
| Hazardous Materials Coordinator Training |         |          |      |
| ENGINEER                                 | DATE    | APPROVAL | DATE |
| <i>Dan MacDonald</i>                     | 12/7/81 |          |      |

### I. Introduction

This training session is for all Hazardous Materials Coordinators. The EPA (Environmental Protection Agency) and DOT (Department of Transportation) have implemented new hazardous material regulations. All personnel that handle these materials must have training because of the regulations. In this training session we review our old procedures and their revisions on the disposal, ordering and shipping of hazardous materials. I explain the new procedures on the MAPPER information system and hazardous material spills.

The personnel in Environmental Management are:

|                |                    |
|----------------|--------------------|
| Roger Martin,  | X4654 UP, pager 19 |
| Dan MacDonald, | X4714 SR, pager 13 |
| Mark Wilson,   | X4625 UP, pager 54 |
| Greg Grinols,  | X4625 UP, pager 54 |
| Bill Polta,    | X4656 SR, pager 24 |
| Roger Ranzau,  | X4656 SR, pager 32 |
| Reid Oines,    | X4625 UP, pager 68 |
| Mike Medina,   | X4656 SR, pager 24 |
| Mike Gold,     | X4625 UP, pager 54 |

### II. Hazardous Materials Disposal

The duties and policy for Hazardous Material Coordinators is in the packet, handed out. Each coordinator should review the packet. By following these procedures you help in making the disposal of hazardous waste easier. Univac's own pretreatment systems at Shepard Road and Univac Park treats process rinses, acids, and alkalines. We treat 150 GPM at Shepard Road and 30 GPM at Univac Park. The systems generate sludge at a rate of 924 drums/year at Shepard Road and 20 drums/year at Univac Park. A facility in the Chicago area treats and landfills our chromic acid. Shepard Road has 120,000 gallons/year and Univac Park has 2,700 gallons/year at a cost of 48¢ gallon.

Landfilling sludges and caustic solvents cost \$55/drum, plus \$33 for the container cost. The hazardous material secured landfill in use for these materials is in Chicago area. A secure landfill in Alabama buries our PCB capacitors, cyanide solutions and A-20 stripper at a cost of \$129/drum plus \$33 for the container.

A solvent recovery facility disposes of our chlorinated, flourinated and organic solvents. Univac receives a refund when the solvents are at least 40% recoverable. We get a credit of \$.18/pound for freons down to \$.08/pound for methylene chloride and trichloroethane. The organic solvents like isopropyl alco-

**ENVIRONMENTAL CONTROL PROCEDURE**

|                    |      |          |      |
|--------------------|------|----------|------|
| DETAIL DESCRIPTION |      | REF      |      |
| ENGINEER           | DATE | APPROVAL | DATE |

hol, acetone, MEK, toluol and xylol a \$.50/gallon refund is received. Unnecessary mixing of solvents should be prevented at all times. A mixture of flammable and chlorinated solvents cost \$100/drum for disposal. Incineration of a mixed flammable solvents cost \$15-\$30 when not recoverable. High temperature oils used in soldering operations cost \$30/drum for incineration.

A crankcase oil program is in effect for Univac and Univac employees. Employees can bring in used crankcase oil to be dumped. A local asphalt company burns the oil and pays us for it. The funds received for the oil is put into the employee's recreation fund. A drop off point is at each plant.

Hazardous material disposal procedure must be followed. The waste chemical label must be filled out completely. The hazardous material coordinators are the only personnel authorized to sign the waste label. You are the only personnel covered by Sperry Insurance as the authorization indicates.

A new procedure is included in your packet explaining how to gain access to a chemical data system. The system is a MAPPER program. Using the procedure you can call up on a computer terminal all information needed to fill out the waste chemical label. Occupational Health also has a parallel data system. If information for a hazardous material is not in the system give us a call and we can get you that information.

Development of a new MAPPER system has begun. It will track and tabulate the disposal of hazardous materials. With this system we can tell which departments are not doing a good job of separating their wastes.

The Environmental Department is always looking for better methods of disposal, reuse or reclamation of our wastes. We are investigating a chrome regeneration system which plates out the copper. Methods for recovery of metals from our sludge and scrap PC boards are being pursued.

**III. Ordering New Chemicals**

The procedure for ordering hazardous materials, is in the revision stage to make it work better. When ordering hazardous materials use the New Chemical Information form. The form when used with the procedure will inform Occupation Health and Environmental Management of a new chemical coming into our facilities. We can then have safe handling method for employees and methods for disposal of these materials. The procedure also allows us to get the necessary information

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |      |          |      |
|--------------------|------|----------|------|
| DETAIL DESCRIPTION |      | REF      |      |
| ENGINEER           | DATE | APPROVAL | DATE |

into the MAPPER system.

### IV. Hazardous Materials Interplant Truck

A dedicated hazardous material truck started in August. The truck moves all hazardous materials between plants. It also picks up chemicals from vendors. The Environmental Management department is the dispatcher for the truck so when you need its service call us. Whenever you have something to ship, use a Hazardous Materials Transfer (HMT). The information needed to fill out the HMT is in the MAPPER system.

### V. Spill Procedure ECP37009

A procedure for hazardous material spills is included in the information handed out, it should be reviewed. In the event of a spill contact the guards at:

Shepard Road X4400  
Midway X3000  
Univac Park X3000

or Environmental Management department at:

Shepard Road X4656 or X4714  
Midway call Shepard Road X4656 or X4714  
Univac Park X4625 or X4654

Environmental Management has the equipment and the personnel with the training for handling a hazardous material spill.

### VI. Requirements of Coordinators

As coordinators, we want you to do three things when you return to your department. First have a training session with all personnel in your department handling hazardous waste materials. All personnel receiving training must sign an attendance roster included with packet handed out. Send the attendance roster back to Roger Martin at U1N14 when training is completed. Secondly, we will send an old list of your chemical usage, we want you to update it and send it back to Roger Martin at U1N14. Thirdly, would you help us in communicating all new chemicals and new processes to us.

### VII. Conclusion

In conclusion, Univac is doing an excellent job of protecting the environment. Continue to help us to do a good job. With your authorization as a hazardous materials coordinator,

~~SECRET~~ UNIVAC

ECP 37016C REV. 1

PAGE 5 OF 6

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION

REF

ENGINEER

DATE

APPROVAL

DATE

Univac will stand behind you unless something is done  
willfully wrong.

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION

Hazardous Materials Coordinator Training

REF

ENGINEER

DATE

APPROVAL

DATE

### APPENDIX

- I. List Environmental Management Personnel - hand out
- II. Waste Chemical Coordinator duties - hand out
- III. Statement of policy PM-4.5.18 - hand out
- IV. Disposal Procedure ECP 37001 - hand out
- V. Waste Chemical label - transparency
- VI. Mapper System - HMDF ECP 38017
- VII. Mapper Mode 382, 1B - transparency
- VIII. Mapper sample screen mode type B - transparency
- IX. HMDF Access - transparency
- X. Dock Log - transparency
- XI. WRR Analysis - transparency
- XII. Emergency Response Procedure ECP 37009 - hand out
- XIII. Attendance Roster - hand out

8/16/79

SPERRY UNIVAC DEFENSE SYSTEMS DIVISION  
WASTE CHEMICAL COORDINATOR DUTIES

1.0 PURPOSE

The purpose of the Waste Chemical Coordinator is to have at least one representative from each cost center that uses chemicals, knowledgeable about rules and regulations concerning hazardous chemical handling procedures.

2.0 DUTIES

- 2.1 Act as a coordinator for the cost centers assigned by the department manager and the Environmental Management Department with regard to hazardous material control.
- 2.2 If authorized in writing according to Sperry Univac policy, P.M.-4.5.18, certify that the contents of waste chemicals containers are as stated on waste chemical labels, UDI-2744 or UDI-3635 and insure that the label is properly completed and attached to the container.
- 2.3 Instruct all of the personnel affected in the cost centers represented in the policies and procedures of hazardous material handling.
- 2.4 Have extensive knowledge of all of the chemicals and processes used in the areas of responsibility.
- 2.5 Encourage conservation and good housekeeping practices in the areas of representation.

February 4, 1983

HAZARDOUS MATERIAL COORDINATOR

| DEPARTMENT              | NO.  | MANAGER                       | PLANT                           | 1st SHIFT   | 2nd SHIFT  | 3rd SHIFT                     |
|-------------------------|------|-------------------------------|---------------------------------|---|--|-------------------------------|
| Office Services         | 1330 | W. W. Becker<br>X4647 UIQ13   | All                             | E. J. Grosam  |  |                               |
| ant Services            | 1350 | M. L. Levinski<br>X4648 UIQ14 | SR<br>M<br>UP<br>SR<br>UP<br>SR | J. D. Belisle<br>N. M. Repp<br>J. H. Whitman<br>L. T. Handwerk<br>R. W. Voigt<br>M. D. Newell<br>R. K. Sporre<br>J. L. Botnen | R. D. Goddard<br>J. L. Fugua<br>G. T. Braum<br>F. E. Redepenning |                               |
| Transportation Services | 1360 | J. L. Zaimet<br>X4664 ULP14   | All                             | J. L. Zaimet  |  |                               |
| P.C. Fab Production     | 2111 | S. R. Kulyas<br>X4594 SIF22   | SR                              | B. M. Bahr<br>D. A. Jersak<br>D. L. Thorkildson   | M. M. Kaske<br>B. Perseke  | D. E. Richards<br>R. Mansager |
| Metal Fab               | 2121 | S. R. Kulyas<br>X4694 SIF22   | SR<br>M                         | D. L. Lingofelt<br>H. H. Conrad   | C. E. Kalka  |                               |
| Assembly                | 2122 | M. C. King<br>X4349 SIF17     | SR                              | R. K. Martin<br>G. M. Jenson<br>D. J. Johnson   | R. L. Radloff<br>B. A. Bernloehr                                 |                               |
| Final Assembly          | 2123 | R. J. Sherlock<br>X4302 SIF17 | SR<br>SR                        | C. J. Nicosia<br>L. E. Swenson  |  |                               |
| Core Matrix             | 2122 | M. C. King<br>X4349 SIE09     | SR                              | B. Alsleben   |  |                               |
| Material Control        | 2312 | C. O. Babb<br>X4774 SIK15     | All                             | G. J. Bryse<br>D. Pozega  |  |                               |
| ipping                  | 2350 | R. F. Green<br>X4562 SLL18    | All                             | D. D. Hywald  |  |                               |
| Advanced Memory         | 2640 | M. C. King<br>X4349 SIE09     | SR                              | G. O. Eide<br>W. R. Patrick   |  |                               |
| C. Lab Production       | 2813 | B. Teply<br>X2972 ULK16       | UP                              | D.M. Manikowski<br>N. P. Dohm   |  |                               |
| Film Memory Dep.        | 2836 | R. E. Tice<br>X4501 SIA01     | SR                              | M. W. Neuman<br>D. A. Osnek   | G. E. Dubrall  | D. F. Fern                    |
| Mfg. Techniques         | 2841 | C. J. Bukkila<br>X4156 SIA01  | SR                              | L. C. Zierhut   |  |                               |
| YK-44 Pre-Production    | 2620 | C. J. Bukkila<br>X4156 SIA01  | SR                              | D. B. Erickson  |  |                               |

## HAZARDOUS MATERIAL COORDINATOR

| DEPARTMENT            | NO.  | MANAGER                        | PLANT | 1st SHIFT                    | 2nd SHIFT       | 3rd SHIFT   |
|-----------------------|------|--------------------------------|-------|------------------------------|-----------------|-------------|
| Factory Support       | 2842 | W. H. Kircher<br>X4727 S1L18   | All   | T. Burger                    |                 |             |
| Prototype Mfg.        | 2860 | R. S. Carar<br>X2890 U2T20     | UP    | W. J. Nelson                 | M. A. Hogland   |             |
| Refurbishment         | 2862 | O.M. Kalzenberg<br>X7656 M1F34 | M     | H. H. Conrad<br>B. L. Bahls  |                 |             |
| Prototype Cust. Sup.  | 2862 | O.M. Kalzenberg<br>X7656 M1F34 | M     | H. H. Conrad<br>B. L. Bahls  |                 |             |
| Customer Repairs      | 2870 | R. L. Chapman<br>X4673 S1F02   | SR    | R. W. Zamudio                |                 |             |
| Documentation Service | 4370 | K. A. Behnke<br>X3860 U1K13    | ALL   | R. M. Eng                    |                 |             |
| Reproduction Service  | 4371 | P. L. McCarthy<br>X3978 U1K13  | UP    | R. M. Eng                    |                 |             |
| Photo/Microfilm Serv. | 4372 | D. P. Radle<br>X5701 U0P15     | UP    | R. M. Eng                    |                 |             |
| Publication Service   | 4375 | D. P. Radle<br>X5701 U0P15     | UP    | R. M. Eng                    |                 |             |
| Duplicating Services  | 4376 | P. L. McCarthy<br>X3978 U1K13  | All   | R. M. Eng                    |                 |             |
| Microfilms Services   | 4341 | D. W. Laminen<br>X3979 U1K13   | UP    | R. M. Eng                    |                 |             |
| PC Artwork Lab        | 4330 | R. E. Langer<br>X3808 U2S20    | UP    | D. C. Finstren               |                 |             |
| Chemical Engineering  | 4350 | R. E. North<br>X4574 U2P22     | UP    | E. R. Quam                   |                 |             |
| Material Eng.         | 4351 | D. A. Domrose<br>X4542 U2P12   | UP    | E. R. Quam                   |                 |             |
| Elect. Comp. Eng.     | 4351 | K. L. Asplund<br>X3701 U2P22   | UP    | E. R. Quam                   |                 |             |
| SI/Hybrid Development | 7325 | D. M. Meyer<br>X2787 U1W22     | UP    | J. A. Carow                  |                 |             |
| Medical Sciences      | 4440 | S. J. Lins<br>X2979 U2P26      | UP    | R. H. Dean                   |                 |             |
| WOS Processing        | 7265 | J. P. Victorey<br>X4140 Y1L1   | UP    | V. Thompson<br>P. T. Weyandt | J. A. Strempeke | K. Jennings |



## HAZARDOUS MATERIAL COORDINATOR

| DEPARTMENT            | NO.  | MANAGER                        | PLANT                     | 1st SHIFT  | 2nd SHIFT   | 3rd SHIFT  |
|-----------------------|------|--------------------------------|---------------------------|--|-------------|------------|
| Photomask Lab         | 7372 | N. Garaffa(Jr.)<br>X2716 ULX26 | UP                        | E. J. Hillman  | R. Reller   |            |
| Polar Lab             | 7355 | E. D. Haygood<br>X4238 U2X26   | UP                        | M. Schow<br>N. P. Decker<br>L. A. Heuer  | L. O. Smith | T. Syrstad |
| Inspection Engineer   | 6406 | L. R. Quam<br>X4343 S1F02      | SR                        | F. M. Sos  |             |            |
| Receiving Inspection  | 6521 | N. J. Tillges<br>X4949 S1F17   | SR                        | G. Hill<br>E. Dzielsky   | D. Timm     |            |
| Failure Analysis      | 6432 | J. M. Gorres<br>X4630 S1F07    | SR                        | D. West<br>U. Siriyuwasakdi  |             |            |
| Stores                | 2311 | C. O. Babb<br>X4774 S1K15      | UP<br>SR<br>SR<br>SR<br>M | W. E. Harrmann<br>K. C. Wieden<br>S. L. Capaul<br>M. McDermott<br>H. Conrad<br>B. Bahlf  |             |            |
| Clearwater Restricted |      |                                |                           | K. Bailey<br>J. Conover<br>N. Huu<br>R. Laatsch<br>L. Lee<br>C. Mattix<br>R. Owens<br>M. Roofner<br>C. Sisco<br>J. Tanner<br>B. Brown          |             |            |
| Clearwater Authorized |      |                                |                           | L. Becraft<br>L. Knapp<br>R. Nepowada<br>J. Willert<br>M. Ayers<br>L. Smith<br>H. Dawkins<br>D. Tisher<br>M. Andrews<br>C. Thomas<br>D. Rivers |             |            |

## ATTENDANCE ROSTER

Date: 12/7/83

Purpose: Waste Chemical Coordinator Training

Instructors: Roger Martin

Mark Wilson

[illegible]

# WASTE COORDINATORS MEETING

DAN MAC DONALD  
ROSEY MARTIN

3/30/83

Name

Group #

James Roy Heelberg  
Nuc P Decker

Bipolar Operator  
Bipolar-7352

Mike Schow

Bipolar-7352

Del Finstuen

C.C. 4330 Design Eng. Services

LARRY ZIERHUT

AMT-CC2841

RALF ENG

CC 4370-71-72-73-76

X Susan P. Capaul

Stores Plt 1

X Bill Nelson

Proto Type 1960

Edward Hillman

Photomask

RICHARD DEAN

Physical Sciences CC 4440

Rob Roller

Photomask

TOM SYRSTAD

- BIPOCAR

Larry Smith

Bipolar

DAN MAC DONALD  
ROGER MARTIN

WASTE COORDINATORS MEETING

3/29/83

NAME

DEPT NAME

DEPT #

|                   |                   |         |
|-------------------|-------------------|---------|
| Harold J. Bryan   | Tools + Supplies  | 2312    |
| Dan J. Bryan      | Tools + Supplies  | 2312    |
| Ken J. Bryan      | Cust. Repair      | 2870    |
| Margaret Haglund  | Prototype         | 2860    |
| Mike Heilmann     | T-Bird            | 2836    |
| MIKE BURKLEA      | CERAMIC CIRCUITS  | 2810    |
| Harold Cougal     | Metal Lab         | 2121    |
| Bob Bernolich     | P.C. Assy         | 2122    |
| Marilyn J. Denott | Stores            | 2311-12 |
| J. L. Fugger      | Facilities Maint. | 1350    |

# ATTENTANCE ROSTER

Date: 2/22/83

Purpose: HAZARDOUS WASTE COORDINATOR TRAINING

Instructors: Roger Martin

Dan MacDonald

| Name                        | Clock Number | Department           |
|-----------------------------|--------------|----------------------|
| ✓ <i>Night Vision</i>       | 428          | F.A.                 |
| ✓ <i>[Signature]</i>        | 59563        | Rec. Tech.           |
| ✓ <i>R. [Signature]</i>     | 39948        | P.C. Fab             |
| ✓ <i>Don [Signature]</i>    | 25692        | T-B                  |
| ✓ <i>ERHil</i>              | 16635        | Rec. Insp.           |
| ✓ <i>D. FERN</i>            | 13530        | T-Bird               |
| ✓ <i>John Whitman</i>       | 19116        | FAC. MAINT.          |
| ✓ <i>Darlene Johnson</i>    | 21233        | P.C. Assy            |
| ✓ <i>Dan E. [Signature]</i> | 25721        | P.C. FAB             |
| ✓ <i>Helen [Signature]</i>  | 13208        | P.C. Fab             |
| ✓ <i>Don Longfellow</i>     | 19661        | M Fab                |
| ✓ <i>Bruce Bahls</i>        | 12905        | REFUVB               |
| ✓ <i>Tom Burger</i>         | 51490        | Factory Support      |
| ✓ <i>Wayne Patrick</i>      | 20599        | P.C. ASSY            |
| ✓ <i>RON MARTIN</i>         | 9876         | P.C. ASSY / SUB ASSY |
| ✓ <i>John [Signature]</i>   | 59276        | MAINT                |
| ✓ <i>Jim [Signature]</i>    | 55776        | 1350                 |
| ✓ <i>MD Newell</i>          | 19740        | 1350                 |
| ✓ <i>Roger [Signature]</i>  | 62737        | 1232                 |
| ✓ <i>Mike [Signature]</i>   | 64127        | 1232                 |

## ATTENTANCE ROSTER .

Date: 2/22/83

**Purpose:** HAZARDOUS WASTE COORDINATOR TRAINING

Instructors: Roger Martin

**Dan MacDonald**

[illegible]

# ATTENTANCE ROSTER

Date: 2/23/83

Purpose: HAZARDOUS WASTE COORDINATOR TRAINING

Instructors: Roger Martin

Dan MacDonald

| Name              | Clock Number | Department       |
|-------------------|--------------|------------------|
| ✓ Bud Quam        | 10839        | MFL Eng          |
| ✓ D.M. Manikowski | 13493        | PC Lab           |
| ✓ Neil Dohm       | 39946        | P.C. Lab         |
| ✓ John F. Zimmert | 1338         | Transportation   |
| ✓ Louis Handcock  | 53505        | E MAINT          |
| ✓ James Gossam    | 51496        | Facilities Comm. |
| ✓ James Carow     | 51305        | HYBRID           |
| ✓ Randy Lane      | 63389        | F. MAINT.        |
| ✓ Carl Vought     | 7741         | F. MAINT         |
| ✓ B. V. Laiten    | 64277        | F. MAINT         |
| ✓ P. R. Kelsom    | 37533        | F MAINT          |
| ✓ Gary Wyant      | 62878        | NOS              |
| ✓ Jones, Stephen  | 64210        | NOS              |
| ✓ J. L. Laiten    | 21515        | Rec. Insp        |
| ✓ Vicki Thompson  | 64325        | NOS              |
|                   |              |                  |
|                   |              |                  |
|                   |              |                  |
|                   |              |                  |
|                   |              |                  |
|                   |              |                  |
|                   |              |                  |

## ATTENTANCE ROSTER

Date: 2/23/83

Purpose: HAZARDOUS WASTE COORDINATOR TRAINING

Instructors: Roger Martin

Dan MacDonald.

[illegible]



## HAZARDOUS MATERIAL WASTE COORDINATORS TRAINING

I. INTRODUCTION - ENVIRONMENTAL MANAGEMENT - (ROGER)

II. COORDINATORS DUTIES - (ROGER)

A. LABELING - (VIEW GRAPH)

B. REGULATIONS

C. ENFORCEMENT

III. INFORMATION SYSTEMS - MAPPER - (DAN)

A. INFORMATION AVAILABLE

1. HAZARDOUS MATERIAL INFORMATION

A. RID TYPE B - (VIEW GRAPH)

SHIPPING INFORMATION

B. RID TYPE I - (VIEW GRAPH)

SAFETY INFORMATION

2. HAZARDOUS MATERIAL DOCK LOG

SOLVENT SEPARATION - (VIEW GRAPH)

3. HAZARDOUS MATERIAL INVENTORY - (VIEW GRAPH)

B. ACCESS - JHMDF, 100, DATA

(VIEW GRAPH)

IV. NEW CHEMICAL ORDERING PROCEDURE - (DAN)

A. ORDER FORM - (VIEW GRAPH)

B. CHEMICAL IN SYSTEM REQUISITION TO INVENTORY SUPPLY

V. INTER-PLANT TRUCK - (DAN)

HAZARDOUS MATERIALS ONLY

VI. SPILL PROCEDURE - (DAN) - (VIEW GRAPH)

VII. QUESTIONS - (DAN, ROGER)

APPENDIX H-7  
GUARD TRAINING

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION  
GUARD TRAINING

REF

ENGINEER *Dan MacDonald*  
Dan E. MacDonald

DATE  
1/19/83

APPROVAL

*Martin*

DATE  
1/24/83

### I. INTRODUCTION - ENVIRONMENTAL MANAGEMENT

#### A. PERSONEL:

Roger Martin - Manager at Univac Park

#### UNIVAC PARK:

Mark Wilson - 1st Technician  
Greg Grinols - 2nd Technician (covers Shepard Road)  
Mike Gold - 3rd Technician  
Reid Oines - 1st Technician

#### SHEPARD ROAD:

Bill Polta - 1st Technician  
Mike Medina - 3rd Technician  
Dan Mac Donald - 1st Engineer

(HAZARDOUS TRUCK INTERPLANT AND MIDWAY)

Roger Ranzau - 1st Technician

#### B. PURPOSE AND FUNCTION

1. Pollution Control - Regulations  
Water, Air and Land Discharges
2. Operate Waste Water Treatment Systems
3. Disposal of Hazardous Waste
4. Spill emergencies

### II. COVERAGE - ROUTINE ITEMS

#### A. DEFINITION - ROUTINE ITEMS

Any alarm for Waste Treatment Systems and Tanks or any occurrence in Environmental Management area. (Prints of building)

#### B. CALL ORDER - WEEK DAYS

1. Call Labs - Univac Park x4625  
- Shepard Road x4656  
Engineer - Shepard Road x4714 1st  
Manager - Univac Park x4656 1st
2. Page Technician - All have pagers.

**ENVIRONMENTAL CONTROL PROCEDURE**

|                                      |                 |          |      |
|--------------------------------------|-----------------|----------|------|
| DETAIL DESCRIPTION<br>GUARD TRAINING |                 | REF      |      |
| ENGINEER<br>Dan E. MacDonald         | DATE<br>1/19/83 | APPROVAL | DATE |

**C. CALL ORDER - WEEKENDS**

1. Emergency call list board
  - a. Call technician on duty
  - b. Page technician on duty
  - c. Start calling down list of Environmental Management personnel
2. Shepard Road guards will have to call Univac Park to find out who is on duty.
3. A technician does visit Univac Park and Shepard Road once per day on weekends.

**III. HAZARDOUS MATERIAL EMERGENCY****A. DEFINITION FROM ECP 37009**

A spill or occurrence involving any hazardous material outside of plants, this includes all bulk deliveries and fuel oil. Inside the plant any occurrence involving a material with a hazard code rating of 2 or above should be treated as an emergency.

**B. HAZARD CODE DIAMOND**

Explain: (Diamond Label)

**C. CALL HAZARDOUS MATERIAL EMERGENCY COORDINATOR**

1. Rounds
2. Any reported spill form call emergency number x3000 (get: name of person, location, nature of spill, material)
3. List of emergency coordinators

**D. EXPLAIN EMERGENCY PROCEDURE ECP 37009**

1. Keep people clear
2. Get help
3. Communication
4. Procedure at each Guard Station

**E. HIGH POTENTIAL AREAS FOR SPILL (Plant Layouts)**

Univac Park  
Shepard Road  
Midway

**F. SPILL OFF OF UNIVAC PROPERTY**

Receive call on x4812 Univac Park  
Call Hazardous Material Emergency Coordinator immediately

**ENVIRONMENTAL CONTROL PROCEDURE**DETAIL DESCRIPTION  
GUARD TRAINING

REF

ENGINEER

Dan E. MacDonald

DATE

1/19/83

APPROVAL

DATE

**IV. CONCLUSION - STRESS WHERE GUARDS CAN HELP****A. REPORT UNUSUAL OCCURANCES**

1. Round
2. Reports to Guard Stations
3. If in doubt - Call

**B. IF SPILL OCCURS**

1. Communications
2. Help keep people clear of area
3. Back up support

APPENDIX H-8

HAZARDOUS MATERIAL CONTROL PROGRAM

## TRAINING SYNOPSIS STATEMENT

TRAINING TITLE  
HAZARDOUS MATERIAL CONTROL PROGRAMAREA  
PLANT 1

## TRAINING GOAL:

INSTRUCT EVERYONE IN PROCUREMENT CONCERNED WITH THE REVISED  
HAZARDOUS MATERIAL REQUISITION PROCEDURE.

JOB CLASSIFICATION OF TRAINEES

TRAINING FREQUENCY

## METHOD USED:

☐ WORK EXPERIENCE☐ OTHER TRAINING (i.e., VENDOR SCHOOL)☒ CLASS/GROUP LEARNING☐ ON THE JOB TRAINING☐ OTHER (SPECIFY)☐ INDEPENDENT STUDY

## PROCESS DESCRIPTION:

## PROFICIENCY MEASUREMENT TECHNIQUES:

☐ ORAL INTERVIEW☐ PRODUCT EVALUATION☐ SIMULATION EXERCISE☐ PERFORMANCE TEST☐ WRITTEN TEST☒ SITUATIONAL OBSERVATION

## INSTRUCTOR'S NAME AND QUALIFICATIONS:

ROGER J. MARTIN, ENVIRONMENTAL MANAGEMENT  
E. R. EVAVOLD, OCCUPATIONAL HEALTH PROGRAMS

## REMARKS



## OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

Roscoe Ewald, O.H.C., Sgt. Master, Enw. N.Y.

DATE

12-29-82

DESCRIPTION OF TRAINING

HAZARDOUS MATERIAL

HOURS OF INSTRUCTION

2 hours

| PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION | PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION |
|-------------------|-----------------|--------------|-------------------|-----------------|--------------|
| M.C. Farrell      | 28682           | Procurement  |                   |                 |              |
| DeEgan            | 63449           | "            |                   |                 |              |
| L. Kaur           | 40967           | "            |                   |                 |              |
| El Peterson       | 20461           | "            |                   |                 |              |
| A.R. Lancelle     | 22580           | "            |                   |                 |              |
| Trud Johnson      | 15433           | "            |                   |                 |              |
| B.B. Matzke       | 22107           | "            |                   |                 |              |
| Tom Goergen       | 37570           | "            |                   |                 |              |
| Leo Stark         | 28694           | "            |                   |                 |              |
| Mary Wernet       | 58709           | "            |                   |                 |              |
| Auto Ford         | 62164           | "            |                   |                 |              |
| M.V. Snyder       | 21142           | "            |                   |                 |              |
| E. B. Boney       | 22312           | "            |                   |                 |              |
| John Hunter       | 63469           | "            |                   |                 |              |
| Tom Pinks         | 61586           | "            |                   |                 |              |
| R.W. Cerege       | 5087            | "            |                   |                 |              |
| Irwin Agur        | 22128           | "            |                   |                 |              |
| Ray Spinn         | 55490           | "            |                   |                 |              |
| A. Portugal       | 28388           | "            |                   |                 |              |
| T. Doul           | 25573           | "            |                   |                 |              |
| Nana Dengu        | 62743           | "            |                   |                 |              |
| R. Swenson        | 38489           | "            |                   |                 |              |
| R. ACE            | 63927           | "            |                   |                 |              |
| M. J. Hay         | 14442           | "            |                   |                 |              |
| C. I. D. +        | 14913           | "            |                   |                 |              |

SPERRY UNIVAC

## OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

Roger Martin

Roscoe Ewald

DATE

11-3-82

DESCRIPTION OF TRAINING

Hazardous Chemical Control Program

HOURS OF INSTRUCTION

| PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION     | PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION |
|-------------------|-----------------|------------------|-------------------|-----------------|--------------|
| Ron Bergh         | 63278           | Occ. Health Rep. |                   |                 |              |
| Paula Kelly       | 64421           | " " "            |                   |                 |              |
| Roger Rayson      | 62737           | ENR. MGMT.       |                   |                 |              |
| Bill Miller       | 59553           | R & I            |                   |                 |              |
| Bill Miller       | 20167           | Sub Assen. P.E.  |                   |                 |              |
| Trudi Johnson     | 15423           | PURCHASING       |                   |                 |              |
| D.R. SHERANDE     | 32870           | P.C. FAB ENG.    |                   |                 |              |
| LC Zierhut        | 9470            | A.M.T.           |                   |                 |              |
| Brady             | 19661           | M.F.             |                   |                 |              |
| BL Boyd           | 12905           | Re FUEL          |                   |                 |              |
| ALL CARRER        | 15200           | KR F. PHIL       |                   |                 |              |
| ER Hill           | 16635           | Rec. Insp.       |                   |                 |              |
| D. Tress          | 42051           | Inv. Serv.       |                   |                 |              |
| X. Borne          | 27516           | ✓ ✓              |                   |                 |              |
| Enr. wk SOS       | 50065           | Insp. Engn.      |                   |                 |              |
| Gene Kent         | 12745           | Sub-Assen. P.E.  |                   |                 |              |
| Fuller            | 27805           | Prod. Engn.      |                   |                 |              |
| B.J. Hulse        | 59281           | FACT. SUPP.      |                   |                 |              |
| Mike Harn         | 18672           | T-Bird           |                   |                 |              |
| Ron               | 16722           | Deposition       |                   |                 |              |
| Charles Hing      | 21708           | T-Bird           |                   |                 |              |
| G WANGEN          | 39949           | PC FAB           |                   |                 |              |
| DC Nelson         | 16553           | PC Fab           |                   |                 |              |
| DK. Gann          | 6463            | Rec.             |                   |                 |              |

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## OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

REPORTER'S NAME Kener Martin Roscoe Evans

DATE \_\_\_\_\_

11-3-82

### DESCRIPTION OF TRAINING

SECTION OF TRAINING  
Nesadores Chemical Control Program

### HOURS OF INSTRUCTION

[illegible]

TRAINING SYNOPSIS STATEMENT

|  |                 |
|--|-----------------|
| TRAINING TITLE<br>HAZARDOUS MATERIAL CONTROL PROGRAM | AREA<br>PLANT 8 |
|--|-----------------|

TRAINING GOAL:  
INSTRUCT EVERYONE CONCERNED ABOUT THE REVISED HAZARDOUS MATERIAL  
REQUISITION PROCEDURE.

|                                |                    |
|--------------------------------|--------------------|
| JOB CLASSIFICATION OF TRAINEES | TRAINING FREQUENCY |
|--------------------------------|--------------------|

METHOD USED:

- |  |   |
|--|---|
| <input type="checkbox"/> WORK EXPERIENCE                 | <input type="checkbox"/> OTHER TRAINING (i.e., VENDOR SCHOOL) |
| <input checked="" type="checkbox"/> CLASS/GROUP LEARNING | _____   |
| <input type="checkbox"/> ON THE JOB TRAINING             | <input type="checkbox"/> OTHER (SPECIFY)                      |
| <input type="checkbox"/> INDEPENDENT STUDY               | _____   |

PROCESS DESCRIPTION:

PROFICIENCY MEASUREMENT TECHNIQUES:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> ORAL INTERVIEW   | <input type="checkbox"/> PRODUCT EVALUATION | <input type="checkbox"/> SIMULATION EXERCISE                |
| <input type="checkbox"/> PERFORMANCE TEST | <input type="checkbox"/> WRITTEN TEST       | <input checked="" type="checkbox"/> SITUATIONAL OBSERVATION |

INSTRUCTOR'S NAME AND QUALIFICATIONS:

ROGER J. MARTIN, ENVIRONMENTAL MANAGEMENT  
E. R. EVAVOLD, OCCUPATIONAL HEALTH PROGRAMS

REMARKS

## OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

EREINOLD / R J MARTIN

DATE

11-9-82

DESCRIPTION OF TRAINING

HAZARDOUS MATERIAL CONTROL PROGRAM

HOURS OF INSTRUCTION

| PARTICIPANTS NAME   | EMPLOYEE NUMBER | ORGANIZATION   | PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION |
|---------------------|-----------------|----------------|-------------------|-----------------|--------------|
| MARY MICHAUD        | 63131           | P.C. LAB       |                   |                 |              |
| Dale Peterson       | 37382           | P.C. LAB       |                   |                 |              |
| ✓ Bill NELSON       | 19919           | PROTO TYPE     |                   |                 |              |
| MARK WILSON         | 53968           | ENV MGMT       |                   |                 |              |
| REID OINES          | 64128           | ENV MGMT       |                   |                 |              |
| Lynn Kierow         | 23865           | Env. Mgmt.     |                   |                 |              |
| Dana Rodgers        | 58668           | SD Mat Control |                   |                 |              |
| R. J. FERLY         | 11620           | P.C. LAB.      |                   |                 |              |
| ✓ Kelly Herrmann    | 7201            | Stores         |                   |                 |              |
| ✓ Lenni Handrich    | 63535           | CM             |                   |                 |              |
| ✓ James Whitman     | 19116           | FAC. MAINT.    |                   |                 |              |
| ✓ Lloyd Chapman     | 37553           | "              |                   |                 |              |
| ✓ Joseph Voigt      | 7741            | "              |                   |                 |              |
| Ken Warner          | 33598           | Prototype      |                   |                 |              |
| Art Muhl            | 63184           | P.C. LAB       |                   |                 |              |
| ✓ E. J. Kellum      | 16827           | Photomash      |                   |                 |              |
| Art T. Ryan         | 57137           | P.C. Lab       |                   |                 |              |
| ✓ Donald B. Michaud | 13495           | P.C. LAB       |                   |                 |              |
| ✓ R. L. Starnes     | 22862           | PROTO MFG.     |                   |                 |              |
| ✓ W. W. Reich       | 18544           | PROTO MFG.     |                   |                 |              |
| ✓ Marge Koglund     | 19835           | Proto typ      |                   |                 |              |
|                     |                 |                |                   |                 |              |
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[illegible]

## OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME *James Martin Low Mgt E.R. Emerald OHP* DATE *11-10-82*  
 DESCRIPTION OF TRAINING *Magazine Chemical Control Program* *Part 1*  
 HOURS OF INSTRUCTION

| PARTICIPANTS NAME    | EMPLOYEE NUMBER | ORGANIZATION          | PARTICIPANTS NAME | EMPLOYEE NUMBER | ORGANIZATION |
|----------------------|-----------------|-----------------------|-------------------|-----------------|--------------|
| <i>James Brown</i>   | <i>63125</i>    | <i>Material Mgt.</i>  |                   |                 |              |
| <i>C.B. Uziok</i>    | <i>38043</i>    | <i>" "</i>            |                   |                 |              |
| <i>Nick Hicoria</i>  | <i>428</i>      | <i>Final Assy</i>     |                   |                 |              |
| <i>Ken McCalland</i> | <i>20679</i>    | <i>prototype</i>      |                   |                 |              |
| <i>R.L. Hunt</i>     | <i>2137</i>     | <i>PER H.</i>         |                   |                 |              |
| <i>J. Brown</i>      | <i>64761</i>    | <i>Exped.</i>         |                   |                 |              |
| <i>D. Shuf</i>       | <i>14855</i>    | <i>Exped</i>          |                   |                 |              |
| <i>J. M. L.</i>      | <i>61517</i>    | <i>Inv. Serv.</i>     |                   |                 |              |
| <i>D. Kook</i>       | <i>19864</i>    | <i>EXPER</i>          |                   |                 |              |
| <i>Arthur Tenter</i> | <i>50153</i>    | <i>Exped</i>          |                   |                 |              |
| <i>P. Hammon</i>     | <i>6180</i>     | <i>2123</i>           |                   |                 |              |
| <i>A. Tark</i>       | <i>25692</i>    | <i>T-BIRD</i>         |                   |                 |              |
| <i>D. Kroph</i>      | <i>5038</i>     | <i>Mit Fck</i>        |                   |                 |              |
| <i>W. L. V.</i>      | <i>24755</i>    | <i>PROTO</i>          |                   |                 |              |
| <i>R. K. K.</i>      | <i>3581</i>     | <i>Procurement</i>    |                   |                 |              |
| <i>F. Kycek</i>      | <i>22126</i>    | <i>" "</i>            |                   |                 |              |
| <i>D. H. J.</i>      | <i>14453</i>    | <i>Shipping</i>       |                   |                 |              |
| <i>W. K. K.</i>      | <i>11212</i>    | <i>T-BIRD</i>         |                   |                 |              |
| <i>Shab Harbour</i>  | <i>8174</i>     | <i>Data Control</i>   |                   |                 |              |
| <i>J. L. Milom</i>   | <i>39982</i>    | <i>Mtl. Mgmt.</i>     |                   |                 |              |
| <i>D. C. H.</i>      | <i>63060</i>    | <i>Mtl. Mgmt</i>      |                   |                 |              |
| <i>M. D. J.</i>      | <i>19740</i>    | <i>Tool Mgmt</i>      |                   |                 |              |
| <i>J. C. DAVIS</i>   | <i>62958</i>    | <i>Safety</i>         |                   |                 |              |
| <i>J. E. G.</i>      | <i>24449</i>    | <i>Mfg Test Oper.</i> |                   |                 |              |

SPERRY UNIVAC

# OPERATIONS TRAINING RECORD

INSTRUCTOR'S NAME

DATE \_\_\_\_\_

11-10-f2

DESCRIPTION OF TRAINING

| HOURS OF INSTRUCTION |     |
|----------------------|-----|
| 1                    | 2   |
| 3                    | 4   |
| 5                    | 6   |
| 7                    | 8   |
| 9                    | 10  |
| 11                   | 12  |
| 13                   | 14  |
| 15                   | 16  |
| 17                   | 18  |
| 19                   | 20  |
| 21                   | 22  |
| 23                   | 24  |
| 25                   | 26  |
| 27                   | 28  |
| 29                   | 30  |
| 31                   | 32  |
| 33                   | 34  |
| 35                   | 36  |
| 37                   | 38  |
| 39                   | 40  |
| 41                   | 42  |
| 43                   | 44  |
| 45                   | 46  |
| 47                   | 48  |
| 49                   | 50  |
| 51                   | 52  |
| 53                   | 54  |
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| 57                   | 58  |
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| 77                   | 78  |
| 79                   | 80  |
| 81                   | 82  |
| 83                   | 84  |
| 85                   | 86  |
| 87                   | 88  |
| 89                   | 90  |
| 91                   | 92  |
| 93                   | 94  |
| 95                   | 96  |
| 97                   | 98  |
| 99                   | 100 |

Plot 1

[illegible]



DISTRIBUTION LIST

S. R. Kulyas  
B. M. Bahr  
D. A. Jersak  
D. L. Thorkildson  
D. Parham  
H. Friant  
M. M. Keske  
B. Perseke  
E. L. Arne  
G. C. Nilson  
D. O. Brown  
R. R. Johnson

*Dick Manganen*  
*Dennis Erickson*

}



## INTERCOMMUNICATION

TO: Distribution List

FROM (NAME & EXT): R. J. Martin - X4654

LOCATION & DATE: St. Paul - 1 Sept 83

DEPARTMENT & M.S.: Env. Mgmt. - ULN14

CC: E. T. Michaud

SUBJECT: Hazardous Chemical Use

Environmental regulations require us to maintain very close control on the disposal of chemicals used in your department.

It is timely to meet with you to explain the latest regulations and how they affect Sperry.

We have scheduled a meeting in room L18A at Shepard Road at 2:30 on September 7.

The liability of improperly handling waste chemicals could impact everyone that is in a position of responsibility for specifying, ordering or using hazardous materials. This could affect each of you.

Therefore, it is extremely important for you to attend the meeting. Please mark your calendar.

It is expected that the supervisors and managers listed above will invite anyone else that is not included on the list but should be in attendance.

R. J. Martin  
Manager  
Environmental Management

/Imk



INTERCOMMUNICATION

TO: S. R. Kulyas  
D. J. Lingofeldt  
C. E. Kalka  
J. M. Klempka  
*Gollie Tahn*

CC: E. T. Michaud

FROM (NAME & EXT): R. J. Martin - X4654

LOCATION & DATE: St. Paul - 1 Sept. 83

DEPARTMENT & M.S.: Env. Mgmt. - U1N14

SUBJECT: Hazardous Chemical Use

Environmental regulations require us to maintain very close control on the disposal of chemicals used in your department.

It is timely to meet with you to explain the latest regulations and how they affect Sperry.

We have scheduled a meeting in room LI8A at Shepard Road at 1:30 on September 9.

The liability of improperly handling waste chemicals could impact everyone that is in a position of responsibility for specifying, ordering or using hazardous materials. This could affect each of you.

Therefore, it is extremely important for you to attend the meeting. Please mark your calendar.

It is expected that the supervisors and managers listed above will invite anyone else that is not included on the list but should be in attendance.

R. J. Martin  
Manager  
Environmental Management

/lmk

# ATTENDANCE RECORD

PC FAB SUPERVISORS AND  
ENGINEERS

9/7/83

|    | NAME<br>(PLEASE PRINT) | POSITION      | PLATING, LAM,<br>PHOTO, ETC | SHIFT | EXTENSION |
|----|------------------------|---------------|-----------------------------|-------|-----------|
|    |                        |               |                             |       |           |
| 1  | KULYAS Steve           | Prod. Manager |                             | 1     | 4594      |
| 2  | DENNIS Brown           | Prod. ENGR    | Lam, Glass Photo            | 1     | 4167      |
| 3  | Betty Perseke          | Fab. Super.   | Photo - ETC                 | 2     | 4703      |
| 4  | DENNIS E. RICHARDS     | FAB SUP.      | REPAIRING                   | 3     | 4594      |
| 5  | Richard Mansager       | FAB SUP       | Plating                     | 3     | 4594      |
| 6  | Helen Faint            | Fab. Sup      | Drilling                    | 1     | 4363      |
| 7  | Gerrard Wilson         | Fab. Sup      | FAB                         | 1     | 4531      |
| 8  | Daniel A. Jorack       |               |                             |       |           |
| 9  | LEWIS BONE             | FAB SUP       | USA - PLATED                | 1     | 4245      |
| 10 | DON THORNTON           | FAB SUP       | PHOTO/PLATING               | 1     | 4703      |
| 11 |                        |               |                             |       |           |
| 12 |                        |               |                             |       |           |
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| 38 |                        |               |                             |       |           |
| 39 |                        |               |                             |       |           |
| 40 |                        |               |                             |       |           |

1. Completely fill out orange "Waste Chemical" label, soon to be yellow "Hazardous Waste" label.
2. Accurate list of "Coordinators" and engineers.
3. Inform me when changes occur.
4. Chemical ordering procedure.
5. Review what is available before ordering a new chemical.
6. Use products already in use, heptane, for chloroethane etc.  
"Employee and community Right To Know legislative - 3000 PN's.
7. Waste, use ID from master list.
8. Specific containers for each waste.
9. Different departments using similar products.
  - we will get you together
  - 12 types of freons
  - 5 antifoam
  - 5 rust inhibitors
  - 8 types of M.C. (including cold degreaser).
10. Be selective about accepting samples - do not take it unless you have a need.
11. Scrap samples soon after it is used.
12. Cost of disposal is \$80/drum. Could be credit.
13. Superfund - up to 32¢/gallon if not recycled.
14. Reuse of solvents and oils, recycling possible at less cost.
15. Half full drums not being filled.
16. Use safety cans for waste - not original containers - rinse original containers 3 times before discarding.
17. Current liabilities.
18. Water usage.

# ATTENDANCE

## METAL FAB PRODUCTION

### SUPERVISORS + ENGINEERS

9/9/83

|  |  |  |  | 1               | 2         | 3     | 4         |
|--|--|--|--|-----------------|-----------|-------|-----------|
|  |  |  |  | NAME            | POSITION  | SHIFT | EXTENSION |
|  |  |  |  | (PLEASE PRINT)  |           |       |           |
|  |  |  |  | R. F. TERHAAR   | P. E.     | 1     | 4485      |
|  |  |  |  | J. M. KLEMPKE   | P. E.     | 1     | 4519      |
|  |  |  |  | D. L. Lingofelt | Metal Fab | 1     | 4171      |
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DISTRIBUTION LIST

M. C. King  
G. O. Eide - *Results (Don't sign)*  
G. M. Jensen  
D. J. Johnson ✓  
R. K. Martin ✓  
W. R. Patrick ✓  
R. L. Radloff ✓  
B. L. Alsleben  
~~L. M. Merck~~

*Ron Suseth*

*Larry Nipen*

*John Dwyer*



INTERCOMMUNICATION

TO: Distribution List

FROM (NAME & EXT): R. J. Martin - X4654

LOCATION & DATE: St. Paul - 1 Sept. 83

DEPARTMENT & M.S.: Env. Mgmt. - U1N14

CC: E. T. Michaud

SUBJECT: Hazardous Chemical Use

Environmental regulations require us to maintain very close control on the disposal of chemicals used in your department.

It is timely to meet with you to explain the latest regulations and how they affect Sperry.

We have scheduled a meeting in room L18A at Shepard Road at 2:30 on September 8.

The liability of improperly handling waste chemicals could impact everyone that is in a position of responsibility for specifying, ordering or using hazardous materials. This could affect each of you.

Therefore, it is extremely important for you to attend the meeting. Please mark your calendar.

It is expected that the supervisors and managers listed above will invite anyone else that is not included on the list but should be in attendance.

A handwritten signature in dark ink, appearing to read "R. J. Martin", written over the typed name.

R. J. Martin  
Manager  
Environmental Management

/lmk



# ATTENDANCE RECORD

## SUB ASSEMBLY SUPERVISORS AND PRODUCTION ENGINEERS

9/8/83

|    | NAME<br>(PLEASE PRINT) | POSITION      | AREA WORK              |       | EXT. |
|----|------------------------|---------------|------------------------|-------|------|
|    |                        |               | IC-                    | SHIFT |      |
| 1  | ROBERT L. KARLAFF      | SUPV          | ENTIRE FLOW            | 2     | 4762 |
| 2  | WAYNE PATLICK          | SUPV          | SEM-WH RPNP            | 1     | 4762 |
| 3  | Darlene Johnson        | Supv.         | Insertion              | 1     | 4361 |
| 4  | RON GUENTHER           | PROD ENG.     | SUB-ASSY               | 1     | 4370 |
| 5  | MIKE KING              | PROD. MANAGER | SUB ASSY               | 1     | 4349 |
| 6  | RON MARTIN             | SUPERVISOR    | SUBASSY (DOUBLE DEPTH) | 1     | 4295 |
| 7  | Galen Eide             | "             | "                      | PC    | 4361 |
| 8  | BETTY ALSLEBEN         | "             | "                      | PC    | 4207 |
| 9  | GERALDINE JENSEN       | SUPERVISOR    | CORE MEMORY            |       | 4207 |
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SUB-ASSEMBLY

9/8/83

1. Review chemicals purchased vs. chemical disposed.
2. Discuss need for using waste labels:
  - Completely filling out
  - Use descriptions from wastes list
  - Certify (do not sign before checking)
3. Check list of coordinators and engineers.
4. Inform us when changes are made.
5. Chemical ordering procedure.
6. Review what is available before ordering a new chemical, not a big problem with Sub Assembly.
7. Use a product that is a big use item if possible rather than discept chemicals., i.e., check rid 5.
8. Specific container for each waste.
9. Inform everyone in the department that uses safety cans they must keep waste separate, identify safety cans.
10. Reduce the use of chlorinated solvents, eliminate if possible.
11. We are reviewing chemicals used by different departments using similar but not the same chemical, i.e.:
  - 12 types of freon
  - 5 rust inhibitors
  - 5 antifoam
  - 8 types of M.C. (including cold degreaser)
  - See if types can be reduced
  - Reduced inventory less stress for storage space
  - See sheet dated 5/3/83

12. Be selective about accepting samples. Do not take one from a vendor unless there is a real need. Do not take one just to be a nic' guy. Scrap as soon as information is obtained.
13. Reuse of oil.
14. Cost of disposal -
  - \$80.00 for incineration
  - Up to 32¢/gallon for state superfund if not recycled.
15. Use safety cans for waste.
  - Not original containers
  - Rinse containers three times before disposing solvents
  - Empty completely.
16. Current liabilities.
  - Ecolotec
  - Andover
  - Sperry Vickers
  - Bristol
  - SLC



INTERCOMMUNICATION

TO: R. J. Sherlock  
C. J. Nicosia  
L. E. Swenson  
W. R. Miller

FROM (NAME & EXT): R. J. Martin - X4654  
LOCATION & DATE: St. Paul - 1 Sept. 83  
DEPARTMENT & M.S.: Env. Mgmt. - U1N14  
SUBJECT: Hazardous Chemical Use

CC: E. T. Michaud

Environmental regulations require us to maintain very close control on the disposal of chemicals used in your department.

It is timely to meet with you to explain the latest regulations and how they affect Sperry.

We have scheduled a meeting in room L18A at Shepard Road at 9:00 on September 9.

The liability of improperly handling waste chemicals could impact everyone that is in a position of responsibility for specifying, ordering or using hazardous materials. This could affect each of you.

Therefore, it is extremely important for you to attend the meeting. Please mark your calendar.

It is expected that the supervisors and managers listed above will invite anyone else that is not included on the list but should be in attendance.

R. J. Martin  
Manager  
Environmental Management

/lmk

# FINAL ASSEMBLY PRODUCTION SUPERVISORS AND ENGINEERS

9/9/83

|    |  |  |  |  | 1              | 2                       | 3     | 4         |
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| 1  |  |  |  |  | Bill Miller    | P.E. MGR                | 1st   | 4188      |
| 2  |  |  |  |  | DICK SHERLOCK  | ASSY HGR-FINAL ASSEMBLY | 1st   | 4302      |
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INTERCOMMUNICATION

TO: Distribution List

FROM (NAME & EXT): R. J. Martin - X4654

LOCATION & DATE: St. Paul - 1 Sept. 83

DEPARTMENT & M.S.: Env. Mgmt. - ULN14

CC: E. T. Michaud .

SUBJECT: Hazardous Chemical Use

Environmental regulations require us to maintain very close control on the disposal of chemicals used in your department.

It is timely to meet with you to explain the latest regulations and how they affect Sperry.

We have scheduled a meeting in the Thin Film Dept. Conference Room at Shepard Road at 8:30 on September 14.

The liability of improperly handling waste chemicals could impact everyone that is in a position of responsibility for specifying, ordering or using hazardous materials. This could affect each of you.

Therefore, it is extremely important for you to attend the meeting. Please mark your calendar.

It is expected that the supervisors and managers listed above will invite anyone else that is not included on the list but should be in attendance.

R. J. Martin  
Manager  
Environmental Management

/lmk

ATTACHMENT IV  
CLOSURE PLAN

SPERRY CORPORATION  
2751 SHEPARD ROAD  
ST. PAUL, MINNESOTA 55164  
MND 000 823 922



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| ECP  | 37013 | REV | G |
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## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage  
and Treatment Facilities Disk #L-ac-2

REF 40 CFR Part 264

ENGINEER *D. E. MacDonald*  
D. E. MacDonald

DATE  
1/3/86

APPROVAL

*Roger Martin*

DATE  
1/3/86

### 1.0 Purpose

The purpose of this procedure is to establish the method for closure of the hazardous waste storage and treatment facilities at the Sperry location which were permitted by the State or federal government as such. This procedure also includes an appendix showing the financial requirements for closure of each of the facilities.

### 2.0 Scope

At such time that the various Sperry hazardous waste storage or treatment facilities would be no longer used, they must be closed in such a manner to minimize the need for further maintenance and would control, minimize or eliminate to the extent necessary to protect human health and the environment escape of hazardous waste after the facility is closed.

### 3.0 Closure Plan

NOTE: See appendix A.

### 4.0 Notice of Closure

At such time as one or all of the waste storage or pretreatment facilities is planned to be closed, a plan must be submitted to the Administrator of Region V EPA 180 days preceding the closure.

### 5.0 Time for Closure

5.1 Within 90 days from receiving the last volume of hazardous waste, all of the waste will be treated as required and remove from the site by the hazardous waste hauler.

5.2 Complete closure will be accomplished within 180 days of receiving the final volume of hazardous waste.

### 6.0 Schedule for Final Closure

NOTE: See appendix B.

### 7.0 Certification of Closure

When closure is completed, the General Manager of the facility must submit to the Region V EPA Administrator certification by Sperry and by an independent registered professional engineer that the facility has been closed in accordance with the specification in the approved closure plan.





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## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage  
and Treatment Facilities

REF 40 CFR Part 264

ENGINEER  
D. E. MacDonald

DATE

APPROVAL

DATE

### 8.0 Financial Requirements

- 8.1 A cost estimate of the closure of each facility is shown in Appendix C.
- 8.2 Review the cost estimate in Appendix C on an annual basis and update the estimate according to the formula in 40 CFR Part 264, Subpart G, 264.142.



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## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage  
and Treatment Facilities

REF 40 CFR Part 264

ENGINEER  
D. E. MacDonald

DATE

APPROVAL

DATE

### APPENDIX A

#### Closure Plan

#### 1.0 Steps necessary to close a hazardous material storage area.

##### 1.1 Management of containers, Note: Clearwater, Midway, Shepard Road, and Sperry Park facilities.

1.1.1 Insure that all hazardous waste is in the appropriate containers as described in CFR 49 or the Sperry Hazardous Material Data System and are stored in the appropriate areas according to Sperry Procedures.

1.1.2 Pump any waste from the spill sumps into the appropriate containers. Any remaining residue must also be removed and put into the appropriate containers.

1.1.3 Decontaminate floors, walls, and equipment used for clean up. Place the residue in an appropriate DOT container for disposal.

1.1.4 Apply all necessary labeling, certifications, manifests, etc., as required by Sperry Procedures and government regulations in preparation for shipping the containers to the approved disposal or reclamation site.

1.1.5 Notify the current vendor under contract for disposal or reclamation of the hazardous waste to make the final pick up and ship them according to established procedures.

##### 1.2 Tanks used for treatment or storage of hazardous waste; Note: Shepard Road and Sperry Park facilities.

1.2.1 Treat all hazardous waste stored in tanks by the appropriate method as described in the Sperry Environmental Control Procedures.

1.2.2 Rinse out the tanks thoroughly to remove any residual waste. This waste must also be treated by the appropriate method.

1.2.3 Inspect the interior of the tanks visually to insure complete removal of waste.

1.2.4 Inspect the dikes for hazardous waste residue. If any exists rinse it and pump it into the reaction tank.



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## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage  
and Treatment Facilities

REF 40 CFR Part 264

ENGINEER  
D. E. MacDonald

DATE

APPROVAL

DATE

1.2.5 When all of the waste from the storage tanks and diked area have been treated, pump out the remaining treated waste from the reaction tank into the clarifier. Remaining sludge can be placed in an appropriate drum for disposal per paragraph 1.1 of this procedure.

1.2.6 Drain the clarifiers through the sludge dewatering filter or centrifuge. Dispose of the sludge per paragraph 1.1. The decanted liquid may be disposed of in the sanitary sewer if it is within the pretreatment standards established at the time of closure. Sample and analyze the effluent to insure compliance.

1.2.7 Thoroughly rinse the clarifier and dewatering devices. Collect the residue in drums and dispose of them per paragraph 1.1.

### 2.0 Maximum estimated inventory of waste.

#### 2.1 Storage

##### 2.1.1 Clearwater

A total of 50 drums, each holding 55 gallons of hazardous waste would be the maximum amount in storage at any one time.

##### 2.1.2 Midway

A total of 15 drums, each holding 55 gallons of hazardous waste would be the maximum amount in storage at any one time.

##### 2.1.3 Shepard Road

1. A total of 244 drums, each holding 55 gallons of hazardous waste would be the maximum amount of drums in storage at any time.
2. A maximum of 25 cubic yards (5000 gallons) of hazardous waste solids can be stored in bulk containers.
3. A total of 5,000 gallons of corrosive hazardous waste and 11,000 gallons of ignitable waste can be stored in bulk tanks.
4. The treatment system contains a total of 12 tanks, containing from 1,000 - 3,000 gallons.



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## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage  
and Treatment Facilities

REF 40 CFR Part 264

ENGINEER  
D. E. MacDonald

DATE

APPROVAL

DATE

### 2.1.4 Sperry Park

1. A total of 15 drums, each holding 55 gallons of hazardous waste would be the maximum amount of drums in storage at any time.
2. A treatment system contains 12 tanks, containing a maximum of 47,000 gallons of waste effluent.

### 3.0 Final closure schedule.

No storage or treatment facility is planned to be closed at this time.

If a closure were to take place the time schedule is shown in Appendix B, page 404A.



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## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage and Treatment Facilities

REF 40 CFR Part 264

ENGINEER  
D. E. MacDonald

DATE

APPROVAL

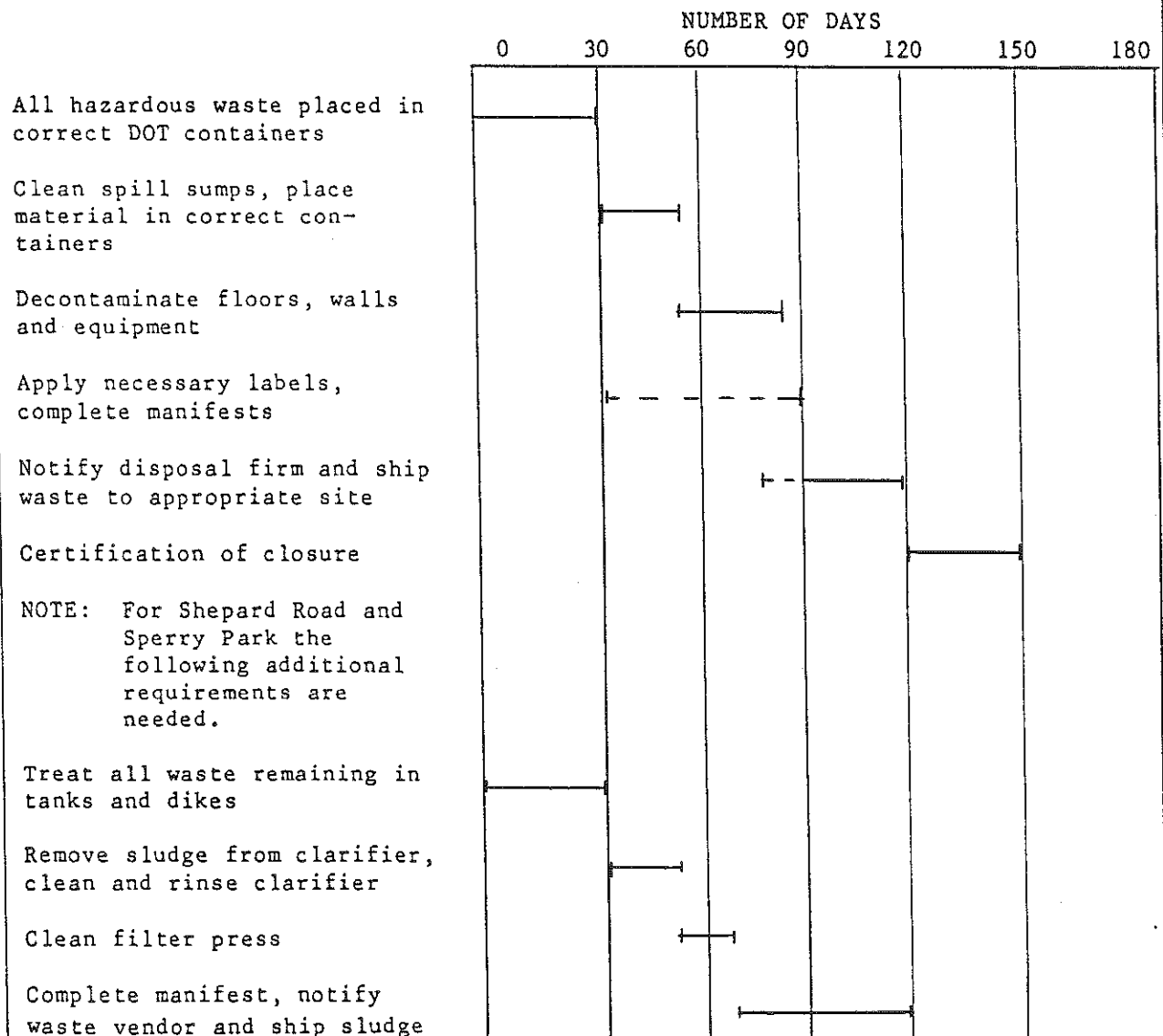
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### APPENDIX B

#### Schedule for Final Closure

#### NOTES:

1. Expected year of closure or partial closure of any of the facilities, is unknown at this time. When it occurs this schedule will apply.
2. This schedule includes closure for each of the following facilities: Shepard Road, Sperry Park, Midway and Clearwater.



non-responsive

non-responsive

non-responsive



## EMERGENCY MOCK SPILL TRAINING

LOCATION: Sperry Park, Plant #8

SCENE OF SPILL: Dock

TIME: 9:00 A.M.

DAY: Monday

### DESCRIPTION OF SPILL:

Move Crew was unloading chemical truck, when a pallet broke, and a box containing Ammonium Hydroxide with four one gallon containers broke on the floor. Move Crew notified:

#### 1. NOTIFICATION:

A. Dial 3000 and give the following information:

1. Name of person calling
2. Location of emergency
3. Nature of emergency

#### 2. COORDINATION:

A. Hazardous Emergency Coordinator, Occupational Health, and Security arrives at the scene of the spill.

#### 3. RECOGNITION AND EVALUATION:

- A. Hazardous Emergency Coordinator gets all the information he can from the Move Crew individual that reported the spill.
- B. He now knows it's Ammonium Hydroxide, and that only Ammonium Hydroxide is involved.
- C. No one has been harmed in anyway.
- D. The area involved has no other chemicals that would react to the spill.

- E. The spill has been contained to the immediate dock area.
- F. Breathing apparatus and protective clothes is necessary for cleanup.
- G. Vacuum cleaner will do the job to clean it up off the floor.

4. CONTROL:

- A. The Hazardous Emergency Coordinator has Security block out all unauthorized personnel.
- B. Calls the Environmental technician to the spill, and has him suit up with protective clothes and a back-pak breathing apparatus.
  - B.1 Have technician use vacuum cleaner from Environmental Management area to get the Ammonium Hydroxide off the floor, and also to pick up broken glass and contaminated cardboard box.
  - B.2 Use the advice of Occupational Health, during the process of cleanup, that might be helpful.

EMERGENCY MOCK SPILL TRAINING

3 Aug 83

LOCATION: Shepard Road, Plant 1

SCENE OF SPILL: Chemical Dock

TIME: 11:30 A.M.

DAY: Monday

DESCRIPTION OF SPILL:

Sodium Bisulfite bulk truck was delivering 900 gallons, when in the process of unloading, a camlock fitting on the hose broke, and the shutoff valve failed to close on the truck. Sodium Bisulfite was flowing in such great quantity from the leak that it was about to run over the berm. Steps to be taken:

1. Notification -

A. Dial 3000 and give the following information:

1. Name of person calling
2. Location of emergency
3. Nature of emergency

2. Action To Be Taken -

A. Divert valve in pit so that Sodium Bisulfite flows into standby tank. Also assess the quality of the air in the area to determine if evacuation of the Plating area is necessary. If so, guards will be responsible for this, through the supervision of the Hazardous Emergency Coordinator and Occupational Health personnel.

3. Coordination - (Recognition and Evaluation)

- A. Hazardous Emergency Coordinator arrives.
- B. Security arrives.

- C. Another Environmental technician arrives.
- D. Environmental technician communicates everything he knows of the situation to the Emergency Coordinator.
  - D.1 Technician reports Sodium Bisulfite is being diverted to standby tank.
  - D.2 That flow can't be stopped at truck tank leak.
  - D.3 Reports quality of air from Sodium Bisulfite entering standby equalization tank in Waste Treatment Pit.
  - D.4 That the truck driver is safe and clear of danger.
- 4. Actions Taken By Hazardous Emergency Coordinator - (CONTROL)
  - A. Directs technician that is suited up with back-pak and protective clothing to start sand bagging at berm to hold Sodium Bisulfite from entering storm sewer.
  - B. Tells other technician to suit up and wear breathing apparatus with five minute egress unit that hooks up to two three hundred pound portable cylinders.
  - C. As soon as the second technician is suited up, he'll go in and relieve the other technician so that he can change from back-pak to a longer air supply egress unit.
  - D. Direct Occupational Health to check on quality of air in pit and surrounding area, and for any safety input on spill.
  - E. Directs Security to keep all people clear of spill and uses them as a communications link.
  - F. Monitors air supply to technicians and the concern of their safety.
- 5. After all danger has passed and everything is under control, the Emergency Coordinator will direct the final clean-up.

## EMERGENCY MOCK SPILL TRAINING

Location: Sperry Park, Plant #8

Scene Of Spill: Dock

Time: 9:00 A.M.

Day: Wednesday

### DESCRIPTION OF SPILL

Bulk truckload of caustic was being delivered. A large leak developed at the pump of the truck. The driver was unable to stop the leak. Environmental technician that was supervising the unloading took the following steps:

#### 1. Notification

A. Dial 3000 and give the following information -

1. Name of person calling
2. Location of emergency
3. Nature of emergency

#### 2. Action To Be Taken

A. Diking can be started by the technician before Emergency Spill Coordinator arrives to prevent a flow to any storm or sanitary drains.

#### 3. Coordination (Recognition and Evaluation)

- A. Hazardous Emergency Coordinator arrives.
- B. Security arrives.
- C. An additional technician arrives.
- D. Occupational Health arrives.
- E. Environmental technician reports everything he knows of the situation to the Hazardous Emergency Coordinator.

E-1 That the truck driver is safe and clear of danger

E-2 There is no possible way of stopping the leak on the truck

E-3 That approximately 450 gallons has been unloaded and there was a total of 4,500 gallons on the truck to start with.

#### 4. Action Taken By Hazardous Emergency Coordinator (Control)

- A. Have technicians continue their diking.
- B. Have Security clear all unauthorized personnel and clear out all vehicles that might obstruct control and cleanup.
- C. Contact outside chemical cleanup contractor.



SPILL RESPONSE TRAINING

|              | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|--------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|
| R. Martin    |     |     |     |     |     | RM   | RM   | RM  |      |     |     |     |
| D. MacDonald |     |     |     |     |     | DM   | DM   | DM  |      |     |     |     |
| R. Oines     |     |     |     |     |     | RO   | RO   | RO  |      |     |     |     |
| M. Wilson    |     |     |     |     |     | MW   | MW   | MW  |      |     |     |     |
| Wm. Polta    |     |     |     |     |     | BP   | BP   | BP  |      |     |     |     |
| R. Ranzau    |     |     |     |     |     | RR   | RR   | RR  |      |     |     |     |
| G. Grinols   |     |     |     |     |     |      |      |     |      |     |     |     |
| M. Medina    |     |     |     |     |     | MM   | MM   | MM  |      |     |     |     |
| M. Kappes    |     |     |     |     |     |      |      |     |      |     |     |     |
| I. Kitzrow   |     |     |     |     |     |      |      |     |      |     |     |     |
|              |     |     |     |     |     |      |      |     |      |     |     |     |
|              |     |     |     |     |     |      |      |     |      |     |     |     |
|              |     |     |     |     |     |      |      |     |      |     |     |     |
|              |     |     |     |     |     |      |      |     |      |     |     |     |

## SECTION I

### CLOSURE PLAN, POST-CLOSURE PLAN, AND FINANCIAL REQUIREMENTS

Sperry has a procedure for the requirements of 40 CFR 122.25(a)(13), 264.112-115, 264.178, 264.197, 264.258 and 270.14(a)(13). The procedure is shown in Appendix I-1, Sperry, ECP 37013 (Page 413). This procedure covers the method of closure and the cost. A post-closure plan is not required because this is not a disposal facility and all waste will be removed in the event of a closure. The entire facility will remain unclosed for the facility life. Copies of the Closure Plan are retained by the Environmental Management Department Manager and by the Environmental Management Supervisors at the Sperry Park and Shepard Road facilities. The Environmental Management Department Manager has the responsibility for updating the Closure Procedure and for updating all copies of the procedure. The Closure Equipment Decontamination Procedures are listed in ECP 37013 starting on Page 416. A statement of Sperry's Financial Test is included in Appendix I-2 (Page 419).



APPENDIX I-1  
HAZARDOUS WASTE CLOSURE OF STORAGE AND  
TREATMENT FACILITIES



|      |       |     |   |
|------|-------|-----|---|
| ECP  | 37013 | REV | F |
| PAGE | 1     | OF  | 8 |

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |  |      |                 |
|--------------------|--|------|-----------------|
| DETAIL DESCRIPTION | Hazardous Waste Closure of Storage and Treatment Facilities Disk #L-ac-2 | REF  | 40 CFR Part 264 |
| ENGINEER           | D. E. MacDonald  | DATE | 11/19/84        |
| APPROVAL           | <i>[Signature]</i>   | DATE | 11/19/84        |

### 1.0 Purpose

The purpose of this procedure is to establish the method for closure of the hazardous waste storage and treatment facilities at the Sperry location which were permitted by the State or federal government as such. This procedure also includes an appendix showing the financial requirements for closure of each of the facilities.

### 2.0 Scope

At such time that the various Sperry hazardous waste storage or treatment facilities would be no longer used, they must be closed in such a manner to minimize the need for further maintenance and would control, minimize or eliminate to the extent necessary to protect human health and the environment escape of hazardous waste after the facility is closed.

### 3.0 Closure Plan

NOTE: See appendix A.

### 4.0 Notice of Closure

At such time as one or all of the waste storage or pretreatment facilities is planned to be closed, a plan must be submitted to the Administrator of Region V EPA 180 days preceding the closure.

### 5.0 Time for Closure

5.1 Within 90 days from receiving the last volume of hazardous waste, all of the waste will be treated as required and remove from the site by the hazardous waste hauler.

5.2 Complete closure will be accomplished within 180 days of receiving the final volume of hazardous waste.

### 6.0 Schedule for Final Closure

NOTE: See appendix B.

### 7.0 Certification of Closure

When closure is completed, the General Manager of the facility must submit to the Region V EPA Administrator certification by Sperry and by an independent registered professional engineer that the facility has been closed in accordance with the specification in the approved closure plan.



|      |       |     |   |
|------|-------|-----|---|
| ECP  | 37013 | REV | F |
| PAGE | 2     | OF  | 8 |

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |                 |   |  |          |                 |
|--------------------|-----------------|---|--|----------|-----------------|
| DETAIL DESCRIPTION |                 | Hazardous Waste Closure of Storage and Treatment Facilities |  | REF      | 40 CFR Part 264 |
| ENGINEER           | D. E. MacDonald | DATE  |  | APPROVAL |                 |
|                    |                 |   |  |          | DATE            |

### 8.0 Financial Requirements

- 8.1 A cost estimate of the closure of each facility is shown in Appendix C.
- 8.2 Review the cost estimate in Appendix C on an annual basis and update the estimate according to the formula in 40 CFR Part 264, Subpart G, 264.142.



|      |       |     |   |
|------|-------|-----|---|
| ECP  | 37013 | REV | F |
| PAGE | 3     | OF  | 8 |

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |   |      |                 |
|--------------------|---|------|-----------------|
| DETAIL DESCRIPTION | Hazardous Waste Closure of Storage and Treatment Facilities | REF  | 40 CFR Part 264 |
| ENGINEER           | D. E. MacDonald   | DATE | APPROVAL        |
|                    |   |      | DATE            |

### APPENDIX A

#### Closure Plan

#### 1.0 Steps necessary to close a hazardous material storage area.

##### 1.1 Management of containers, Note: Clearwater, Midway, Shepard Road, and Sperry Park facilities.

1.1.1 Insure that all hazardous waste is in the appropriate containers as described in CFR 49 or the Sperry Hazardous Material Data System and are stored in the appropriate areas according to Sperry Procedures.

1.1.2 Pump any waste from the spill sumps into the appropriate containers. Any remaining residue must also be removed and put into the appropriate containers.

1.1.3 Decontaminate floors, walls, and equipment used for clean up. Place the residue in an appropriate DOT container for disposal.

1.1.4 Apply all necessary labeling, certifications, manifests, etc., as required by Sperry Procedures and government regulations in preparation for shipping the containers to the approved disposal or reclamation site.

1.1.5 Notify the current vendor under contract for disposal or reclamation of the hazardous waste to make the final pick up and ship them according to established procedures.

##### 1.2 Tanks used for treatment or storage of hazardous waste; Note: Shepard Road and Sperry Park facilities.

1.2.1 Treat all hazardous waste stored in tanks by the appropriate method as described in the Sperry Environmental Control Procedures.

1.2.2 Rinse out the tanks thoroughly to remove any residual waste. This waste must also be treated by the appropriate method.

1.2.3 Inspect the interior of the tanks visually to insure complete removal of waste.

1.2.4 Inspect the dikes for hazardous waste residue. If any exists rinse it and pump it into the reaction tank.



|      |       |     |   |
|------|-------|-----|---|
| ECP  | 37013 | REV | F |
| PAGE | 4     | OF  | 8 |

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage  
and Treatment Facilities

REF 40 CFR Part 264

|                             |      |          |      |
|-----------------------------|------|----------|------|
| ENGINEER<br>D. E. MacDonald | DATE | APPROVAL | DATE |
|-----------------------------|------|----------|------|

1.2.5 When all of the waste from the storage tanks and diked area have been treated, pump out the remaining treated waste from the reaction tank into the clarifier. Remaining sludge can be placed in an appropriate drum for disposal per paragraph 1.1 of this procedure.

1.2.6 Drain the clarifiers through the sludge dewatering filter or centrifuge. Dispose of the sludge per paragraph 1.1. The decanted liquid may be disposed of in the sanitary sewer if it is within the pretreatment standards established at the time of closure. Sample and analyze the effluent to insure compliance.

1.2.7 Thoroughly rinse the clarifier and dewatering devices. Collect the residue in drums and dispose of them per paragraph 1.1.

### 2.0 Maximum estimated inventory of waste.

#### 2.1 Storage

##### 2.1.1 Clearwater

A total of 50 drums, each holding 55 gallons of hazardous waste would be the maximum amount in storage at any one time.

##### 2.1.2 Midway

A total of 15 drums, each holding 55 gallons of hazardous waste would be the maximum amount in storage at any one time.

##### 2.1.3 Shepard Road

1. A total of 244 drums, each holding 55 gallons of hazardous waste would be the maximum amount of drums in storage at any time.
2. A maximum of 25 cubic yards (5000 gallons) of hazardous waste solids can be stored in bulk containers.
3. A total of 5,000 gallons of hazardous waste can be stored in a bulk tank.
4. The treatment system contains a total of 12 tanks, containing from 1,000 - 3,000 gallons.

##### 2.1.4 Sperry Park

1. A total of 15 drums, each holding 55 gallons of hazardous waste would be the maximum amount of drums in storage at any time.



|      |       |     |   |
|------|-------|-----|---|
| ECP  | 37013 | REV | F |
| PAGE | 5     | OF  | 8 |

## ENVIRONMENTAL CONTROL PROCEDURE

|                    |   |     |                 |
|--------------------|---|-----|-----------------|
| DETAIL DESCRIPTION | Hazardous Waste Closure of Storage and Treatment Facilities | REF | 40 CFR Part 264 |
|--------------------|---|-----|-----------------|

|                 |      |          |      |
|-----------------|------|----------|------|
| ENGINEER        | DATE | APPROVAL | DATE |
| D. E. MacDonald |      |          |      |

2. A treatment system contains 12 tanks, containing a maximum of 47,000 gallons of waste effluent.

### 3.0 Final closure schedule.

No storage or treatment facility is planned to be closed at this time.

If a closure were to take place the time schedule is shown in Appendix B, page 404A.



|      |       |     |   |
|------|-------|-----|---|
| ECP  | 37013 | REV | F |
| PAGE | 6     | OF  | 8 |

## ENVIRONMENTAL CONTROL PROCEDURE

DETAIL DESCRIPTION Hazardous Waste Closure of Storage and Treatment Facilities

REF 40 CFR Part 264

ENGINEER  
D. E. MacDonald

DATE

APPROVAL

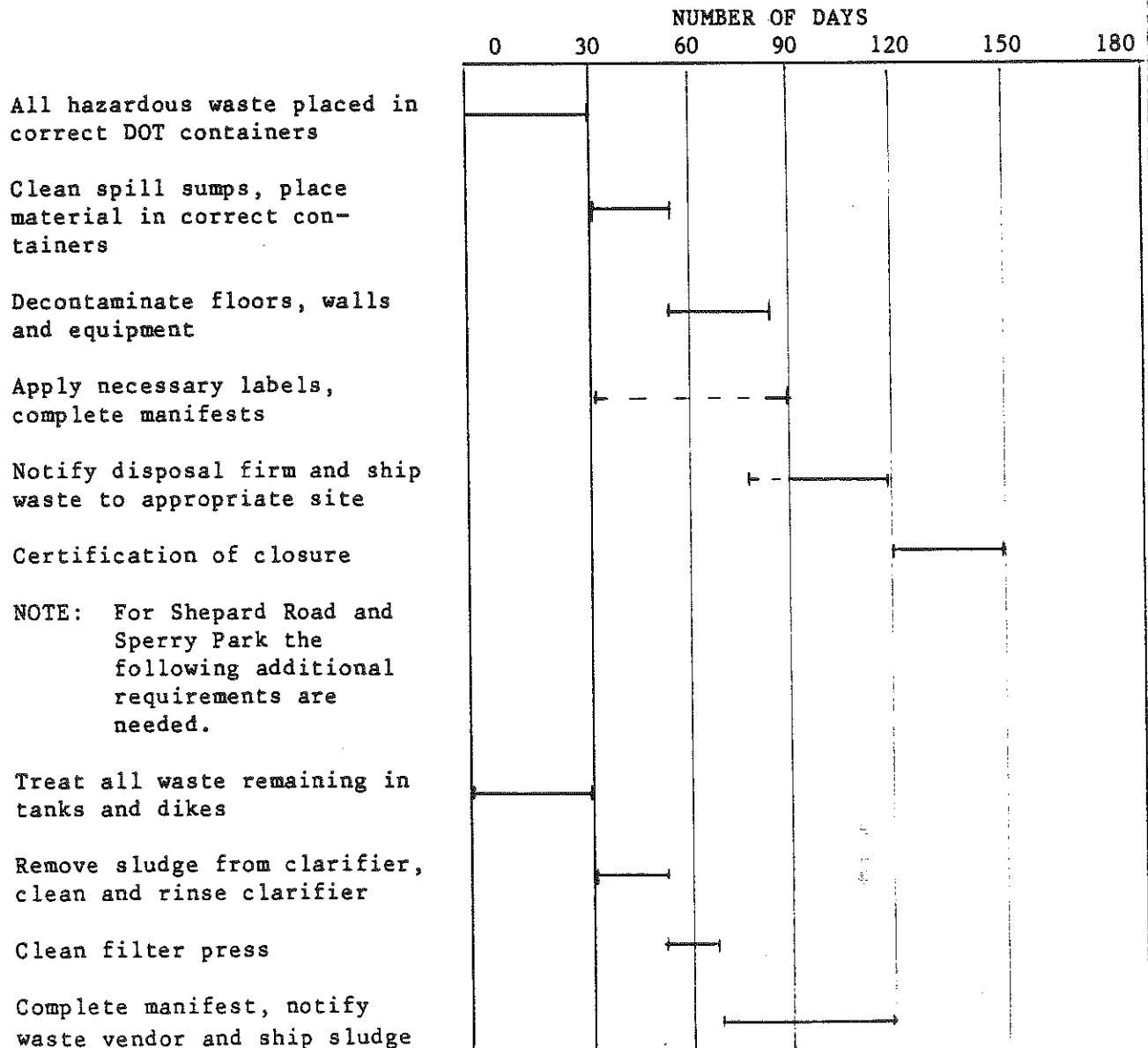
DATE

### APPENDIX B

#### Schedule for Final Closure

#### NOTES:

1. Expected year of closure or partial closure of any of the facilities, is unknown at this time. When it occurs this schedule will apply.
2. This schedule includes closure for each of the following facilities: Shepard Road, Sperry Park, Midway and Clearwater.



non-responsive



non-responsive

APPENDIX I-2  
FINANCIAL TEST

Financial Assurance  
FY 84

INTER OFFICE MEMO

Robert F. Jondreau  
Blue Bell

FROM K. M. Hoffman

DATE July 6, 1984

SUBJECT Financial Assurance for Liability  
Closure and Post-Closure Care of  
Hazardous Waste Treatment, Storage  
or Disposal Facilities.

AUG 16 1984

Enclosed for your information is a copy of the Financial Assurance  
Package that was mailed on June 26, 1984 to EPA Regions IV, V and  
IX and the Tennessee Department of Public Health.

Please let me know if you have any questions.

enc/encls:

TO: Roger Mortimer  
FROM: Will Paul

COPY OF THE SPERRY FINANCIAL ASSURANCE LETTER

This letter demonstrates Sperry's financial responsibility for liability coverage and closure and/or post-closure care as specified in Subpart H of CFR Parts 264 and 265. The letter was written by Vincent R. McLean, Executive Vice President and Chief Financial Officer, dated 14 June 1984. Sperry is required to submit this information annually.

SPERRY CORPORATION  
1290 AVENUE OF THE AMERICAS  
NEW YORK, NEW YORK 10104  
TELEPHONE (212) 464-4771

VINCENT R. MCLEAN  
Executive Vice President  
and Chief Financial Officer

Dear Sir:

I am the chief financial officer of Sperry Corporation, 1290 Avenue of the Americas, New York, N.Y. 10104. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage and closure and/or post-closure care as specified in Subpart H of 40 CFR Parts 264 and 265.

The owner or operator identified above is the owner or operator of the following facilities for which liability coverage is being demonstrated through the financial test specified in Subpart H of 40 CFR Parts 264 and 265:

Business Unit  
of

Sperry Corp.

EPA ID No.

Address

Flight Systems

AZD009004961

21111 N. 19th St.  
Phoenix, AZ 85027

Computer Systems

TND003382801

Sperry Road  
Bristol, TN 37620

Computer Systems

MND000823922

2751 Shepard Road  
St. Paul, MN

Computer Systems

MND000823914

3333 Pilot Knob Road  
Eagan, MN 55116

Computer Systems

FLD004097184

Route 584  
Oldsmar, FL 33551

Computer Systems

MND079731519

2276 Highcrest Road  
Roseville, MN 55113

The owner or operator identified above owns or operates the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure and/or post-closure cost estimates covered by the test are shown for each facility:

| Business Unit<br>of<br>Sperry Corp. | LPA ID No.   | Address                                   | TSD<br>Category | Closure<br>Cost Est. |
|-------------------------------------|--------------|---|-----------------|----------------------|
| Flight Sys.                         | AZD009004961 | 21111 N.19th St.<br>Phoenix, AZ 85027     | S               | \$ 53,776            |
| Computer Sys.                       | TND003382801 | Sperry Road<br>Bristol, TN                | T.S.            | 71,030               |
| Computer Sys.                       | MND000823922 | 2751 Shepard Rd.<br>St. Paul, MN 55116    | T.S.            | 23,365               |
| Computer Sys.                       | MND000823914 | 3333 Pilot Knob Rd.<br>Eagan, MN 55116    | T.S.            | 3,795                |
| Computer Sys.                       | FLD004097184 | Route 584<br>Oldsmar, FL 33557            | S               | 6,820                |
| Computer Sys.                       | MND079731519 | 2276 Highcrest Rd.<br>Roseville, MN 55113 | G.S.T.          | 15,180               |

In States where EPA is not administering the financial requirements of Subpart H of 40 CFR Parts 264 and 265, this owner or operator is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility:

N O N E.

The owner or operator identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Subpart H of 40 CFR Parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility:

N O N E.

This owner or operator is required to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this owner or operator ends on March 31. The figures for the following items marked with an asterisk are derived from this owner's or operator's independently audited, year-end financial statements for the latest completed fiscal year ended March 31, 1984.

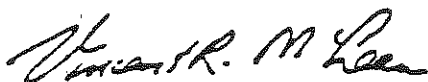
CLOSURE OR POST-CLOSURE CARE AND LIABILITY COVERAGE

(Lines 4 through 11  
in millions)

|      |   |              |
|------|---|--------------|
| 1.   | Sum of current closure and post-closure cost estimates (total of ALL cost estimates listed above) | \$ 173,966   |
| 2.   | Amount of annual aggregate liability coverage to be demonstrated                                  | \$ 8,000,000 |
| 3.   | Sum of lines 1 and 2  | \$ 8,173,966 |
| *4.  | Total liabilities   | \$ 2,699.7   |
| 5.   | Tangible net worth  | \$ 2,778.8   |
| *6.  | Net worth   | \$ 2,802.9   |
| *7.  | Current assets  | \$ 2,639.1   |
| *8.  | Current liabilities   | \$ 1,556.1   |
| *9.  | Net working capital (line 7 minus line 8)   | \$ 1,083.0   |
| *10. | The sum of net income plus depreciation, depletion, and amortization                              | \$ 419.9     |
| *11. | Total assets in U. S.   | \$ 3,920.3   |

|   | <u>Yes</u> | <u>No</u> |
|---|------------|-----------|
| 12. Is line 5 at least \$10 million?  | <u>X</u>   | —         |
| 13. Is line 5 at least 6 times line 3?  | <u>X</u>   | —         |
| 14. Is line 9 at least 6 times line 3?  | <u>X</u>   | —         |
| 15. Are at least 90% of assets located in the U.S.? If not, complete line 16. | —          | <u>X</u>  |
| 16. Is line 11 at least 6 times line 3?                                       | <u>X</u>   | —         |
| 17. Is line 4 divided by line 6 less than 2.0?                                | <u>X</u>   | —         |
| 18. Is line 10 divided by line 4 greater than 0.1?                            | <u>X</u>   | —         |
| 19. Is line 7 divided by line 8 greater than 1.5?                             | <u>X</u>   | —         |

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 264.151(g) as such regulations were constituted on the date shown immediately below.



Vincent R. McLean  
Executive Vice President  
and Chief Financial Officer

June 14, 1984



COPY OF MEMO FROM ARTHUR YOUNG AND COMPANY

This auditor's report confirms that the  
contents of the Financial Assurance  
Letter complies with the Federal require-  
ments.



A MEMBER OF ARTHUR YOUNG INTERNATIONAL

ARTHUR YOUNG

217 Park Avenue  
New York, New York 10172  
Telephone (212) 407-1500  
Telex 141-177704

June 15, 1984

The Board of Directors  
Sperry Corporation

We have read the letter dated June 14, 1984 from Vincent R. McLean, chief financial officer of Sperry Corporation, submitted to the Regional Administrators of the Environmental Protection Agency in support of the use of the financial test, as specified in Subpart H of 40 CFR Parts 264 and 265, to demonstrate financial responsibility for liability coverage and closure and post-closure care of the Corporation's hazardous waste treatment, storage and disposal facilities at the locations listed in that letter.

In connection with Subpart H of 40 CFR Parts 264 and 265, we have compared the independently audited consolidated financial statements of Sperry Corporation for the year ended March 31, 1984 to the specified data in that letter indicated as being derived from such independently audited consolidated financial statements. In connection with this comparison, no matters came to our attention that caused us to believe that the specified data should be adjusted.

This report is solely to assist you in complying with the reporting requirements associated with the financial test, as specified in Subpart H of 40 CFR Parts 264 and 265, to demonstrate financial responsibility for liability coverage and closure and post-closure care, and should not be referred to or used for any other purpose.

*Arthur Young & Company*

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachment and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Date: \_\_\_\_\_

Signature \_\_\_\_\_

E.T. Michaud, Director

Facilities Resources

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachment and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Date:

July 2, 1984

Signature

P. F. Ives

P. F. Ives, Director

Resources Management

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachment and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Date:

9/7/84

Signature

E.T. Michaud

E.T. Michaud, Director

Facilities Resources

# CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachment and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Date: 10/3/84

Signature E. T. Michaud

E.T. Michaud, Director

Facilities Resources

Date: 12/17/84  
Revision: C

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachment and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Date: 19 Dec 1984

Signature Ronald N. Arneberg

R. N. Arneberg, Director

Resources Management